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IMPLEMENTATION UPDATE GUIDE FOR CHCS S/W VERSION 4.51 TO VERSION 4.6 FOR LAB

D/SIDDOMS

CHCS II
COMPOSITE HEALTH CARE SYSTEM

Delivery Order 0150 FY98 Implementation & Training Support Activities, CDRL Item 04

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LIST OF APPENDIXES

How To Use This Document

The Implementation Update Guide (IUG) is a reference manual for the implementation of CHCS Version 4.6. There is an IUG for each functionality. This IUG is applicable to the Laboratory subsystem.

The Table of Contents provides an outline of the information contained in this guide. The document is divided into the following sections:

HOW TO USE THIS DOCUMENT - A description of the document and how to use it.

1. SUMMARY OUTLINE - Brief overview of changes-this can be used as a hand-out to all users.

2. SUBSYSTEM CHECKLIST - This is a step by step list of pre- and post-install implementation activities.

3. CHANGES AND ENHANCEMENTS - a description of each change with subsections including an Overview, Detail of Change, and File and Table Change.

4. APPENDIXES - applicable information pertaining to the implementation of Version 4.6 including Common Files changes, and a Master Checklist for all Subsystems.

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1. Summary Outline.

1.1 New Lab Menu Capability: Lab Store Supervisory Review.

This new feature enables laboratory supervisors to enter and print a report documenting that patient test results on the Specimen Master Log have been reviewed. The capability to review and print the supervisory review report is maintained on CHCS for two years.

1.2 New RES Menu Option: Abnormal or Critical Results by Test.

This additional management menu option is similar to the ACR (Abnormal, Critical and Delta Result Report) menu option. It now enables a user to specify the Lab Test(s) of interest and then choose the Alert level: Abnormal or Critical. The display/print appearance of this new report is compressed automatically to screen or needs to be printed on a device capable of 132 column format. The output devotes one line per specimen.

1.3 New RES Menu Option: Results Turnaround Time Report.

The Results Turnaround Time (TAT) report is a new option to monitor the elapsed time from sample Lab Arrival Time to the time the test result is certified. This tool allows Laboratory Supervisors to monitor and document laboratory response time for Quality Assurance purposes.

1.4 Quality Control Report Menu Option Enhancements.

Quality Control reporting has been enhanced by additions of prompts for Lab Section and Quality Control(s). The QC manager can continue to print out reports as before, or print reports for Lab Sections, whether for one, several or all controls.

1.5 Transfer Automated Results (TAR) Enhancement.

The enhanced Transfer Auto Instrument Results (TAR) option allows users to review, edit individual results and add comments to a test rather than having to file/exit TAR and complete results entry processing using the ERA option. In 4.6, CHCS will now prompt users at the beginning of the accession for methods of any tests that have no default method defined. This upgrade now displays File as the default prompt after the last test result.

1.6 DII/LSI Interface (Replacement) Enhancements.

This enhancement provides error handling capability to the laboratory managers using Data Innovations Incorporated/Laboratory System Interface (DII/LSI) interfaced instruments with regards to the display of errors and the filing of results when using the Transfer Auto Instrument Results (TAR) menu option. The purpose of this enhancement is to minimize the instrument error resolution a LAB user must perform manually. This upgrade also provides the user with the capability of requesting on CHCS that an instrument connection to the DII LSI be started/stopped. The CID sub-option Inquire to LSI's will now provide the status of the connection between CHCS and the DII LSI. The CID sub-option Print Status Report was enhanced to provide the current status of the connection between DII and the actual instrument.

1.7 LAB F/T Means to Activate/Inactivate SNOMED AutoEncoding.

Sites using CHCS AP can now selectively activate or inactivate (per Lab Work Element) CHCS automatic SNOMED encoding for CHCS AP Result entry. An additional benefit from this enhancement is to enable sites to safely activate changes made in the MORPHOLOGY FIELD, ETIOLOGY FIELD and/or TOPOGRAPHY FIELD files.

1.8 AMA CPT Licensure Message Addition to Reports.

AMA CPT Licensure message will print on a separate page immediately before all LAB reports that include CPT codes.

1.9 IPDWC TO DHTI {COPATH} AP (MPL).

CHCS Version 4.6 incorporates the Multiple Performing Lab (MPL) enhancement to APCOTS. MPL was delivered as a Change Package in CHCS version 4.52 to all sites prior to deployment of Version 4.6. Detailed documentation on the MPL enhancement is provided in the LAB Implementation Update Guide associated with that release. {Reference: "LAB: Implementation Update Guide, IPDWC TO COMED AP, MPL Enhancement", Document#: DS-IMPL-5000, dated 25 June 1997}

It is important to note that information and guidance pertaining to the installation of this s/w version applies **only** to those sites that are DOD-approved and funded for APCOTS for Anatomic Pathology. Implementation of MPL is granted/coordinated by the CHCS Program Office. Only DOD-specified sites will be able to use the MPL enhancement for Multiple Labs. **Sites not using**

COPATH for AP do not need to populate fields related to this part of the upgrade.

1.10 LAB HOST PLATFORM PARAMETERS (#8700) - **NEW FILE**.

The Lab Host Platform Parameters file is used to identify the single CHCS platform which hosts CHCS used by all users in all divisions for all the sites sharing the system. There will be a single unalterable entry allowed in this file. The file will contain data which applies to all divisions, work elements, laboratories, and users for this CHCS platform. The LAB MTF (#69.9) is replaced by the LAB HOST PLATFORM PARAMETERS file.

The Lab Host Platform Parameters Edit option includes a field to specify where e-mail bulletins are to be sent to flag a discrepancy between the current blood type stored in the Patient file and the new blood type. The Blood Type data and the source of the data will be transmitted to the Defense Enrollment Eligibility Reporting System (DEERS) from the CHCS Patient file. 4.6 enhancements also include the means to process this information using a non-DBSS lab test for ABO/RH type resulting.

1.11 Blood Bank - Custom Lab Labels.

This enhancement adds new entries in the Label Fields file to allow their use for defining custom Laboratory labels for the following DBSS Blood Bank Tests: TYPE AND SCREEN, TYPE AND CROSS, and AUTOLOGOUS DONATION. The new entries are all Order Entry fields.

1.12 CPT Codes/Modifiers Inclusion in HL7 Messages.

This enhancement encompasses all functional areas of the clinical laboratory and enables CPT Codes and modifiers to be added to the lab test result HL7 message for transmission to all interfaced systems receiving lab test result HL7 messages (e.g.: CEIS, MHCMIS). As a note, when the Laboratory MEC option is used to correct workload counts, a HL7 message is triggered to the CEIS interface to notify of additions, removals and changes to CPT Codes and Modifiers.

2. Subsystem Checklist.

2.1 User Training.

There are two LAB IUG documents to reference for this upgrade:

(a) IPDWC Interface to COMED AP: MPL Enhancement DS–IMPL–5000

(b) This IUG: Upgrade to CHCS Version 4.6.

A 1.5 hr. demo of general 4.6 changes is recommended for Lab Supervisory Personnel prior to activation. The familiarization training plan in Appendix E is recommended as an alternative if a demo is not possible.

If APCOTS is not ACTIVATED or if the MPL enhancement has already been implemented, a 2 to 3 hour block of time for demo or self study is estimated for a **user familiar with CHCS Lab F/T maintenance** to prepare for this upgrade. Sites without users familiar with Lab F/T maintenance have two logical choices, (1) subscribe to standard CHCS training {est. 2-3 days} or (2) request onsite outside assistance.

If the site is preparing to activate APCOTS, an additional 2-3 hours is recommended for demo and to answer site questions.

Attendance: **Lab** KEY POC's: Managers, F/T maintenance, Anatomic Pathology, senior supervisory personnel, Quality Assurance and Lab Trainers.

2.2 Implementation Issues.

___ Familiarity of Lab File/Table Maintenance is essential.

___ Quality Control Report Menu Option Enhancements

Verify that Quality Controls are defined with a Lab Section. Note that this field in the Quality Control file is not required for defining a Quality Control Specimen ... but is needed for this new enhancement to work properly!

___ LAB HOST PLATFORM PARAMETERS (#8700) - **NEW FILE**

For any site needing to activate APCOTS, FileMan Enter/Edit is still required, but this is now done by accessing file #8700 instead of the LAB MTF (#69.9) file.

___ DBSS activation

(1) The CHCS Program Office will direct when/which sites can activate DBSS. This is not a site decision.

(2) In terms of technical requirements, to support this interface, the minimum DBSS S/W version is 2.01.

(3) Recipients to receive discrepancy BLOOD TYPE bulletin:

For each Lab Division DBSS site, the determination will need to be made concerning appropriate entries to receive the Blood Type Bulletin, bearing in mind that Mail Users and Groups may be division specific and Device file entries are MTF-wide.

___ CHCS BLOOD TYPE TEST

If not already defined, a {non-DBSS} laboratory test can be created for CHCS result entry of a patient's Blood Group and Rh Type. The name of this test can be entered in the Lab Host Platform Parameters file. As this test will be shared system-wide, sites will need to reach an agreement for the name.

Note, if existing CH subscript tests already exist, caution needs to be exercised to ensure that test replacements do not compromise existing ORDER SETS. If an order set is defined with an existing lab test that is going to be inactivated, the order set will need to be edited to delete the old test and to add the new one.

One final note is that certain characters (symbols) may need to be avoided when defining the name of the new test. For example, if "&", "\", or "+" are incorporated into the test name, the result will not be received into CliniComp.

___ DAC Results Report {Amended Results}

As a result of version 4.6 s/w changes, laboratory results amended before the upgrade will not be captured on the DAC report for Amended Results. Since this historical data will not be available after the upgrade, it is suggested that Lab Managers (in each Lab Work Element) print the standard DAC report for Amended Results if this report is presently being used/monitored by QA. If this is done on a daily basis for the week preceding the upgrade, then on the day prior to the upgrade, there will be only one days worth of data to be compiled and printed {and the report should complete quickly}.

___ DII/LSI Interface

A new Mail Group should be created by DBA to receive DII Error Message bulletins. Depending upon the needs of the site for those bulletins, consideration should be given for division specific mail groups. DII type entries in the Lab System Interface file would subsequently need to be populated correctly with the appropriate mail group for each division. It is NOT recommended that these mail groups be added in the Bulletin file.

After the upgrade, error messages from DII interfaced instruments will begin to display to lab users during TAR as a part of routine operation. These error messages will also begin to populate the DII ERROR INITIALIZATION and the AUTO INSTRUMENT files. In the Auto Instrument file, this instrument generated error message will populate the ERROR CODE and the associated ACTION CODE and ERROR TEXT. The Action Code populated by the error message is the default, "Display Error/Do Not File". Lab F/T action is required to change this Action Code as needed and enter the User Definable Error Message for each error. The User Definable Error Message field is 'free text' and gives Lab F/T users the means to clarify the error display text and to specify the suitable course of action for the lab user to take when the error is encountered. The Lab F/T interaction will continue until all possible errors have been encountered by the DII interfaced auto instrument and as instrument software upgrades are installed with new and/or different error messages.

___ Routine preparations for version upgrades are done:

Verify there are no outstanding Transmittal Lists, Collection Lists and Work Documents. One of the enhancements of version 4.6 is SIR 14744, which establishes an upper limit on batches as 9999. Any Work Document batches greater than 9999 will not be accessible after the load. Even though a laboratory may have work document batch #'s less than 9999, it is still recommended that all work documents are unloaded as a normal precaution prior to the upgrade.

2.3 **Integration Issues**.

Regarding APCOTS, refer to the MPL Enhancement (Lab IUG).

Regarding DBSS Blood Bank interfaced sites, there are screen changes as a result of this upgrade to the laboratory test ordering screens and results retrieval.

Regarding Same Day Surgery (SDS) enhancements in version 4.6 is the ability to place CLN/LAB/RAD/PHR orders on a new page (APV) on the Patient Order List (POL) screen. This page is associated with a pending SDS patient appointment and any LAB orders are inaccessible for Log-In {or canceling or modifying} until the appointment is made and PAS completes the appointment process. As most pre-op lab work is needed before the surgery, the recommendation is for lab orders to be placed on the OutPt Page. If LAB orders are placed on the APV page and the patient shows up for pre-op LAB work, there is potential for duplicate orders. ScratchPad functionality can be used to copy orders from the APV page to the Outpt Page for processing, but does not prevent the original orders from becoming activated once the APV page is activated.

2.4 File and Table Changes.

Concerning Anatomic Pathology and APCOTS, this upgrade will not affect sites that have already completed File/Table for MPL. There are no software changes from CHCS versions 4.52 to 4.6.

For all DOD-selected and funded sites using APCOTS that have not completed File/Table for MPL, the time estimate needed to accomplish needed tasks is from 1-2 hours.

2.5 Security Keys.

(No new Security Keys)

3. Changes and Enhancements.

3.1 New Lab Menu Capability: Lab Store Supervisory Review.

3.1.1 Overview of Change.

This new feature enables laboratory supervisors to enter and print a report documenting that patient test results on the Specimen Master Log have been reviewed. The capability to review and print the supervisory review report is maintained on CHCS for two years.

3.1.2 Detail of Change.

LAB MENU PATH: LAB->LLM->SRM Supervisory Review Menu

3.1.2.1 SRE Option: Supervisory Review Enter/Edit.

This option provides lab users with the **LRSUPER** security key the capability to document on-line that certified laboratory test results have been reviewed through the Specimen Master Log report for all or selected Accession Areas of the user's work element. **This option also allows edit of previously entered review documentation.**

Screen Prompts:

```
Enter Specimen Master Log Date: T-1// <5.7.97>
Document/edit review of certified results in all Accession Areas? YES// N
Select Accession Area: HE
Do you wish to enter/edit comments? NO// ??

Enter YES if comments need to be documented.  Enter NO if comments do not need to be
documented.  The entering of comments is optional.  This field is a word processing
field and there is no limit on the length of the comments.

Do you wish to enter/edit comments? NO// YES
```

```
***            Supervisory Review Enter/Edit                ***

Specimen Master Log Date: 07 May 1997
Accession Area: HEMATOLOGY

Comments:

All 3 ranges of QC were well within 1 SD of tolerance limits for
Hematology on this day.
```

```
Enter/edit the name of the reviewer: LAB,SFA// <CR>
Enter/edit date and time of review: NOW// <5.8.97@0945>

      Recording of review of certified test results for the selected accession area
      is now complete.

Select Accession Area: ^^         <== Note:  enter ^^ to return to menu
```

Safeguards have been built into the system to allow only one user at a time to access any given accession area at a time to document supervisory review. A second user attempting to perform this task at the same time will be provided the displayed message:

> "Another user is editing this Accession Area."

When one user has opted to document all accession areas, and any of the accession areas are being edited by another user, the system will list the accession areas that are locked. If no accession areas exist within the users work element, the system will display a message indicating that no Accession Areas exist. Users will not be able to access Accession Areas for Supervisory Review that are outside their own work element, without first switching divisions and logging into the other work element(s).

If supervisory review is done for all accession areas, each area with previous documentation is displayed as shown:

> Accession Area [CHEMISTRY] was documented as
> reviewed on [10 May 1997@1610] by [LAB,SF].

Do you wish to edit this documentation? NO// <**CR**>

Following the listing of accession areas that already have review documentation, the system will display a list of the remaining accession areas (if any) that have not been documented as reviewed for the selected Specimen Master Log date. The system will allow the user to continue with the entry of initial review documentation for those accession areas. The pending list will display as follows:

COAGULATION	HEMATOLOGY
MICROBIOLOGY	SPECIAL CHEMISTRY

3.1.2.2 SRP Option: Supervisory Review Print.

This option allows printing a report that displays by Accession Area(s) the documentation of review of certified lab test results through the daily Specimen Master Log report. Data is stored on-line in a new CHCS file, SUPERVISORY REVIEW LOG, #8745. Review documentation older than 2 years will be purged via one of the nightly cleanup {LRUTZAP} routines.

```
MAIN DIVISION                                          09 May 1997@1050  Page 1
            Personal Data - Privacy Act of 1974 (PL 93-579)
                        Supervisory Review Report
                             For: 09 May 1997
Report requested by: LAB,SFA
------------------------------------------------------------------------------
Specimen Master Log Date:  07 May 1997
------------------------------------------------------------------------------
     Accession Area        Reviewed By                  Review Date/Time
------------------------------------------------------------------------------
(1)  HEMATOLOGY            LAB,SFA                      08 May 1997@0945

Comments:

(1)  All 3 ranges of QC were well within 1 SD of tolerance limits for Hematology on
this day.
```

3.1.3 File and Table Change.

(N/A)

3.1.4 Implementation Issues.

(N/A)

3.2 New RES Menu Option: Abnormal or Critical Results by Test.

3.2.1 Overview of Change.

This additional management menu option is similar to the ACR (Abnormal, Critical and Delta Result Report) menu option. It now enables a user to specify the Lab Test(s) of interest and then choose the Alert level: Abnormal or Critical. The display/print appearance of this new report is compressed automatically to screen or needs to be printed on a device capable of 132 column format. The output devotes one line per specimen.

3.2.2 Detail of Change.

MENU PATH: LAB->LRM->RES->ACT Abnormal/Critical Results by Test Report

Prerequisites for this report include such factors as:

- Date of result certification is within the last 35 days.
- Abnormal and/or critical results of tests defined as numeric or set of codes (result type).
- Although the prompt to Select Lab Test will allow a user to pick any test in the database, the report will only list those tests performed in the lab work element the lab user is currently logged into.
- Applies to certified test results for any test performed across all accession areas within associated lab work element that the lab user running this report is logged into.

Menu Prompts:

```
Enter Latest Certify Date: T-1// <CR> to accept default or enter new date
Enter Earliest Certify Date: T-1// <CR> to accept default or enter new date

Select Lab Test: POTASSIUM
Select Lab Test: <CR> to continue or enter another test(s)
(A)bnormal or (C)ritical results?  A// <CR> to accept default or enter C

Use a device that has compressed (132 column) print defined.

DEVICE:
```

3.2.3 File and Table Change.

(N/A)

3.2.4 Implementation Issues.

(N/A)

MAIN LAB 21 Jun 2001@1334 Page 1

Personal Data - Privacy Act of 1974 (PL 93-579)
ABNORMAL/CRITICAL RESULTS BY TEST REPORT
For: 20 Jun 2001 - 21 Jun 2001

Report requested by: TRAINING,MANAGER
Test: HEPATITIS B SURFACE ANTIGEN

Patient Name	FMP/SSN	S/A	Req	Accession Loc	Result	Collect Date
HARRISI,JOHN	20/345-67-8989	M/32	AGNMED	010618 CH 13	POSITIVE H	06/18/01
HARDEN,VERNON	20/555-45-3245	M/32	AGNMED	010618 CH 14	POSITIVE H	06/18/01

*** End of Report ***

L=Low H=High *=Critical /A=Amended

3.3 New RES Menu Option: Results Turnaround Time Report.

3.3.1 Overview of Change.

The Results Turnaround Time (TAT) report is a new option to monitor the elapsed time from sample Lab Arrival Time to the time the test result is certified. This tool allows Laboratory Supervisors to monitor and document laboratory response time for Quality Assurance purposes.

3.3.2 Detail of Change.

MENU PATH: LAB->LRM->RES->TAT Results Turnaround Time Report

The Results Turnaround Time report is lab work element specific and can be used to extract statistics for two years (761 days). Access to this lab menu option requires the LRSUPER security key. When the user elects to print the TAT report for selected test(s), valid responses include both single and panel tests that are performed in the user's lab work element. If tests of a panel are certified at different times, the report will provide those times. If the TAT of results of all tests of the panel are needed, as in all components of a CBC, then it might be more beneficial to select a few tests.

If the user opts print the TAT for "ALL" tests, the report will also include quality control results. The report is first divided alphabetically by locations, Ward then Clinic. Within location, the report is then sorted alphabetically by the patient's last name.

Menu Prompts:

```
o Sort by (A)ccession Area or (S)pecific Accession: A// A
  =>If by Accession Area, Select Accession Area: (multiply asked)
  =>Then (A)ll or (S)elected Tests in this Accession Area: A//
    =>If (A)ll tests, then Print by Priority (S)TAT or (A)LL? A//
      =>From either choice, then Accession Date (Earliest/Latest)

    =>If (S)elected Tests, Select Test: (multiply asked)
      =>Print Data Summary for Selected Tests? YES//

        [The Data Summary includes calculations of the Frequency, the Total TAT,
        and the Average TAT of each test.  Responses are Y/N.]

        =>From either Y/N for summary, then Print by Priority (S)TAT or (A)LL? A//
          =>From either choice, then Accession Date (Earliest/Latest)

  =>If by (S)pecific Accession, Select Accession: (multiply asked)

      [Enter the Accession Area Abbreviation followed by the number part of the
      Accession {eg- CH 123}.  The accessions entered must be current and
      certified and in the users work element.  If the accession entered is in a
      sensitive Accession Area, the requesting user must have the proper security
      key.]
```

- Turn-around time is displayed in days, hours and minutes.
- Although the prompt to Select Lab Test will allow a user to pick any test in the database, the report will only list those tests performed in the lab work element the lab user is currently logged into.
- The user will only get statistical results for tests performed in his/her work element and in case a sensitive accession area is entered during the selection prompts, the proper security key is needed.
- When viewed on the screen, the report compresses to 132 column display mode automatically and if sent to a printer, the device must be 132 column format definable.
- The Data Summary is offered only if the user enters selected tests. It is not offered when the user selects "ALL" tests.

3.3.3 File and Table Change.

(N/A)

3.3.4 Implementation Issues.

(N/A)

MAIN LAB 21 Jun 2001@1338 Page 1

Personal Data - Privacy Act of 1974 (PL 93-579)
Results Turnaround Time Report
For: 18 Jun 2001 - 21 Jun 2001

Report requested by: ADH,USER

Patient	Accession	Test	Coll Time	Lab Arr Time	Cert Time	TAT d h m	Certify Person
Accession Area: CHEMISTRY			Priority: ALL				
Requesting Location: GENERAL MEDICINE CLINIC							
HARCH,SONYA			20/456-89-3232		F/28		
	010618 CH 12	HBSAG	18Jun01@1101	18Jun01@1101	21Jun01@0522	2 18 21	LEVINE,DEBORAH
HARDEN,VERNON			20/555-45-3245		M/32		
	010618 CH 14	HBSAG	18Jun01@1101	18Jun01@1101	21Jun01@0524	2 18 23	LEVINE,DEBORAH
HARRISI,JOHN			20/345-67-8989		M/32		
	010618 CH 13	HBSAG	18Jun01@1101	18Jun01@1101	21Jun01@0523	2 18 23	LEVINE,DEBORAH

**********>>> PAGE BREAK <<<**********

MAIN LAB 21 Jun 2001@1338 Page 1

Personal Data - Privacy Act of 1974 (PL 93-579)
Results Turnaround Time Report
For: 18 Jun 2001 - 21 Jun 2001

Report requested by: ADH,USER

---Data Summary---

Test	Total Frequency	Total TAT d h m	Average TAT d h m
HBSAG	6	16 14 14	2 18 22

*** End of Report ***

3.4 Quality Control Report Menu Option Enhancements.

3.4.1 Overview of Change.

Quality Control reporting has been enhanced by additions of prompts for Lab Section and Quality Control(s). The QC manager can continue to print out reports as before, or print reports for Lab Sections, whether for one, several or all controls.

3.4.2 Detail of Change.

LAB MENU PATH: LAB->LLM->QCM->QCR

The lab user will be allowed to make selections for the standard Quality Control Report:

- Initially Select a Lab Section {enter Lab Section or <CR> to bypass}

- If a Lab Section is entered, CHCS will check for all quality control specimens which have had that lab section entered via the CAE menu option, and prompt: ->"Select ALL Quality Control(s)? YES//"

  If "N"--> user is prompted (multiply) to select QC
  If "Y"--> user will not be prompted for any selections

  The next display from either of the above paths is the familiar listing of QC associated tests and the prompt: "All tests? YES//" {Note: If "ALL Quality Control(s)? YES", prompts for each QC}

- If a Lab Section is NOT initially entered, the user is prompted to enter a Quality Control (only one) and this is the same functionality as before the upgrade.

3.4.3 File and Table Change.

(N/A)

3.4.4 Implementation Issues.

Verify that Quality Controls are defined with a Lab Section. Note that this field in the Quality Control file is not required for defining a Quality Control Specimen. However, it is needed for this new enhancement to work properly!

3.5 Transfer Automated Results (TAR) Enhancement.

3.5.1 Overview of Change.

The enhanced Transfer Auto Instrument Results (TAR) option allows users to review, edit individual results and add comments to a test rather than having to file/exit TAR and complete results entry processing using the ERA option. In 4.6, CHCS will now prompt users at the beginning of the accession for methods of any tests that have no default method defined. This upgrade now displays File as the default prompt after the last test result.

3.5.2 Detail of Change.

Instrument message displays are controlled by how the lab defines the following auto instrument fields: "Certify Prompt During TAR", "Pause After Each Sample" and "Pause After Error Message".

Users begin the TAR process as usual. They enter the name of the auto instrument, the Work Document, work document template, batch number, Data Collection Date and how many messages they wish to have transferred.

Now, when data is received from the instrument, CHCS displays a list of processing error messages. {A processing error is an error message received from the instrument that cannot be associated with any particular test result.} If the Auto Instrument file field "Pause After Error Message" has a value of Yes, the system will pause after each message and require the user to <press return> to continue. If the field is set to No, the error messages will scroll up the screen. When the last message has displayed, the first accession information will be displayed on the screen.

If the Auto Instrument is defined as a DII instrument, enhanced error handling capabilities allow additional control to users. The display of these errors and decision choices whether to accept the result is now definable in the Auto Instrument file (only for DII interfaced instruments!).

The TAR screen remains unchanged and will continue to present test results to the user. Any error message specific to a test will display immediately below the test and result. If the Auto Instrument field "Pause After Error Message" has a value of Yes, the system will pause after each message and require the user to <press return> to continue. If the field is set to No, the error message will display and the system will continue with the next test. Delta checks will display. If a method is needed, the

user will be prompted to enter one. Critical test results will require the users to accept or reject them. If there are more tests than fit on a screen, the system will prompt <press return>. When the user presses <return>, the screen will redisplay the header information and continue with the next tests and results.

When the system reaches the end of the list of tests and the Auto Instrument file field "Certify Prompt During TAR" is set to Yes, a new prompt displays. The prompt is 'Certify, File, Edit Results or Quit,' with File as the default. There is no change to the functionality that existed prior to version 4.6 of CHCS - if the "Certify Prompt During TAR" is set to No, the results will automatically file. Then, if the field "Pause After Each Sample" is set to Yes, the user will have to <press return> to continue; if the field is set to No, the next accession will automatically come up.

If the user selects Edit Results, the system will repaint the screen with the header information and present the tests and results one at a time. The user may change the result by entering a new value, delete the result with the "@", add a comment with the "&" or change the method or edit CPT value with the "\". After all of the tests have been addressed, the prompt 'Certify, File, Edit Results or Quit' will display with the same default as before.

When the results for an accession have been filed or certified, secondary test ordering will take place as it functioned in V4.5.

The next accession will be presented.

CURRENT FUNCTIONALITY:
Note: Initial items below represent existing functionality and are listed for clarity.

- Menu Path: LAB -> LRM -> REM -> IIM -> TAR

- The system prompts the user for the name of an auto instrument. If the user enters "??", only valid instruments defined in the Auto Instrument file are displayed.

- The system prompts for a Work Document name with the Work Document defined in the Auto Instrument file as the default. The user has the opportunity to change the Work Document at this point. If the user enters "??", only valid Work Documents defined in the Work Document file are displayed.

- If the Work Document has more than one template defined, the system prompts the user for the template name. Only valid

templates defined for the specified Work Document are allowed and displayed when "??" is entered.

- The system prompts the user for a batch number with the last batch used as the default unless that particular batch is full, then the next batch in sequence defaults. The batch is created only when the system generates the work document.

- The system prompts for the Data Collection Date with "T" (for today) as the default.

- The system displays the number of messages received and transferred for the date selected. The prompt to select messages to be transferred displays with a default of "ALL". Users may accept the default or enter a range of the numbers.

NEW 4.6 FUNCTIONALITY

- If there are any processing errors from the instrument that cannot be identified as specific to a test result, the system displays a list showing those processing errors in the current batch. If the field "Pause After Error Message" in the Auto Instrument file is set to Yes, the user will be prompted to <press return> to continue. If the field is set to No, the messages will scroll up the screen and the first accession number will be displayed.

For EACH accession:

- The Tar screen will remain unchanged. Results will be sent for individual tests. Before the tests and results display, the user will be prompted to select a valid method for any tests for which the system cannot determine a default. Delta checks will display and critical values will require the users to accept or reject the result.

- Test or result specific errors will display under the test result. If the "Pause after Error Message" field has a value of Yes, the system will pause after the message and require the user to press <return>. If the field is set to No, the message will display and the system will continue to display the remaining tests, results and test errors. The Error display and result handling logic for DII interfaced instruments can now be defined in the Auto Instrument file.

- If there are more tests than can display on the screen, the scrolling will halt and require the user to press <return> to display more tests. The screen will repaint the header information and continue with the next tests and results.

- After all results are received and displayed and the Auto Instrument field "Certify Prompt During TAR" is set to Yes, a new prompt will be presented to the user. The prompt offers the options of Certify, File, Edit Results or Quit with a default of File.

- If the user selects the Edit option, the screen will repaint with the patient information at the top of the screen. The individual tests and results will be presented to the user one at a time.

  a. The user will be able to accept the result by pressing the <Enter> key.

  b. Results may be edited by entering

     - a different value for the test,
     - "@" to remove the result,
     - "&" to add a comment to the test result,
     - "\" to change the method or edit the CPT value.

     Delta checks and the prompt to accept critical values will be presented as in the initial result entry option.

- After each test has been presented to edit, the Certify, File, Edit Results or Quit prompt will display with a default of File.

3.5.3 File and Table Change.

For DII interfaced auto instruments, refer to section 3.6. For other automated instruments, N/A.

3.5.4 Implementation Issues.

For DII interfaced auto instruments, refer to section 3.6. For other automated instruments, N/A.

3.6 DII/LSI Interface (Replacement) Enhancements.

3.6.1 Overview of Change.

This enhancement provides error handling capability to the laboratory managers using Data Innovations

Incorporated/Laboratory System Interface (DII/LSI) interfaced instruments with regards to the display of errors and the filing of results when using the Transfer Auto Instrument Results (TAR) menu option. The purpose of this enhancement is to minimize the instrument error resolution a LAB user must perform manually. This upgrade also provides the user with the capability of requesting on CHCS that an instrument connection to the DII LSI be started/stopped. The CID sub-option Inquire to LSI's will now provide the status of the connection between CHCS and the DII LSI. The CID sub-option Print Status Report was enhanced to provide the current status of the connection between DII and the actual instrument.

3.6.2 Detail of Change.

3.6.2.1 Auto Instrument Error Messages.

To accomplish the error handling enhancement, the DII ERROR INITIALIZATION (#8736) file has been added. This file will contain instrument error data and is populated **only** by HL7 messages transmitted by DII to CHCS. When a lab manager adds a new entry in the Auto Instrument file, all of the errors will be copied from the DII ERROR INITIALIZATION file to the Error Message multiple in the Auto Instrument file for that analyzer. The instrument errors copied into the Auto Instrument file will have the default entry of **DISPLAY ERROR/DO NOT FILE RESULT**. The CHCS Laboratory System Manager or other authorized user will be able to change the default entry at their discretion.

Any instrument error messages encountered that are not in the auto instrument file will trigger an e-mail bulletin to notify users of a specific mail group of the error and that the error action code has been set to DISPLAY ERROR/DO NOT FILE RESULT. Should the lab manager elect, this action **can be changed** to one of the following settings:

- o - Display Error, File Result
- o - Do NOT Display Error, File Result
- o - Do NOT Display Error, Do NOT File Result

3.6.2.2 Start/Stop Instrument Interfaces.

MENU PATH: LAB->LRM->REM->IIM->SSD

Screen Prompts (for a DII/LSI):

```
      Select Lab System Interface:  HL DII LSI  {as an example}
      Select Auto Instrument:  EKTACHEM         {as an example}

      EKTACHEM appears to be Stopped.

     Do you wish to Start EKTACHEM instrument? YES//  <CR>

   Request to Start EKTACHEM instrument has been queued.
    Press <RETURN> to continue:
```

{The screen prompts for non-DII/LSI interfaces are the same as before the DII/LSI product was deployed.}

3.6.2.3 Check Interface Device Menu Updates.

- **Inquire LSI's**

  MENU PATH: LAB->LRM->REM->IIM->CID->I

  The screen output will display the LSI's defined for the Lab Division and indicate present status. Examples would include:

- For standard DEC LSIs, messages following the name given to the LSI are:

  Running, started on DD Mmm YYYY@HH:MM:SS
  Stopped on DD Mmm YYYY@HH:MM:SS
  Terminated on DD Mmm YYYY@HH:MM:SS
  Never started

- For DII/LSIs, these messages display below the name of the LSI:

  Inbound Process: [NAME] Status: Not Running
  Outbound Process: [NAME] Status: Appears to be running

- **Print status report**

  MENU PATH: LAB->LRM->REM->IIM->CID->P

  A new column has been added to the Print Status Report screen to display the current status of the DII interfaced instrument.

Sample Report:

```
                          AUTO INSTRUMENT STATUS REPORT
Report requested by: TRAINING,MANAGER
------------------------------------------------------------------------------
                  LABORATORY SYSTEM INTERFACE: HL DII LSI
------------------------------------------------------------------------------
                     ***  Auto Instruments Status ***
                                          Lines          Lines
LSI Port  Auto Instrument                 Received       Transferred    Status
------------------------------------------------------------------------------

1         CL200                             0              0          Load
           DII Connection Status: Started 21 Jan 1998@1350
```

3.6.3 File and Table Change.

3.6.3.1 AUTO INSTRUMENT (#62.4) File.

New fields include:

.018 DII INSTRUMENT NAME

The name of the instrument as provided by Data Innovations. This name must match exactly with the name of the instrument that DII uses in their software. It is NOT the site-definable name for the instrument.

12 ERROR CODE (multiple)

Entries into this multiple are generated as a result of HL-7 error messages from the DII system. Error codes cannot be entered into this file via the AIE option and should NOT be entered via FileMan.

.01 ERROR CODE

This is the exact string of characters that represents a specific error condition for this instrument. The code may originate directly from the instrument or could be created by the DII system to resolve any case where an analyzer does not generate error messages with unique error codes. New error codes are added to this file via HL-7 messages from the DII system. Error codes cannot be entered into this file via the AIE option and should NOT be entered via FileMan.

.02 ERROR TEXT

This field contains the error message text that comes across the interface from the auto instrument through the DII LSI into CHCS. This field is not editable by site personnel.

.03 USER DEFINABLE ERROR MESSAGE

This is the site-defined English translation for the particular error code. This message text will be used in all places instead of the default message text. It may be up to 245 characters in length. Do not include any formatting characters in this string.

.04 ACTION CODE

This field allows the user to specify the action that is to be taken when this error code is encountered while processing the data in the TAR option. The valid actions are:

1. Display the error message (or user-defined error message) and file the test result.

2. Display the error message (or user-defined error message) and do NOT file the test result.

3. Do NOT Display the error message and file the test result.

4. Do NOT Display the error message and do NOT file the test result.

LAB F/T Menu Path: LAB->LSM->ELA->IIA->AIE {New fields/screens}

```
AUTO INSTRUMENT: EKTACHEM                                          LAAUTO

 Name: EKTACHEM                    Instr Name: DATA INNOVATIONS
 DII Instrument Name: EKTACHEM 750XR
 Accession Area: CHEMISTRY         Work Document: EKTACHEM LOADLIST
 LSI: HL DII LSI                   LSI Port #: 3
 ID Type: ACCESSION NUMBER         Communications Mode: BIDIRECTIONAL
 Continuous or Batch: BATCH        Batch Build: MANUAL
 Certify Prompt During TAR: YES    Skip Accession Entries: NO
 Match Accessions: YES             Pause After Each Sample: NO
 Pause After Error Message: NO


Help = HELP       Exit = F10      File/Exit = DO          INSERT OFF
```

```
AUTO INSTRUMENT: EKTACHEM                        LAAUTO -- CONTINUATION

 Select Error Code:
   $$1

Help = HELP       Exit = F10      File/Exit = DO          INSERT OFF
```

```
AUTO INSTRUMENT: EKTACHEM                        LAAUTO -- CONTINUATION

 Error Code: $$1
 Action: Display Error, Do NOT File Result     <== editable

 Error Text:
 ***WARNING: NON-LINEAR ASSAY!***          <== not editable


 User-Definable Error Message:                 <== editable
  "Result Non-Linear -> Rerun sample along with dilution(s)"

Help = HELP       Exit = F10      File/Exit = DO          INSERT OFF
```

3.6.3.2 LAB SYSTEM INTERFACE (#62.6) File.

New and/or updated fields include:

.02 INTERFACE TYPE {field formerly PROGRAM}

This field defines the physical type of LSI that is being used. There are several types of LSI that can be used. Some utilize an actual hardware device that concentrates the data from multiple instruments onto one communications link to CHCS. Others are simply logical representations of a direct communications link between CHCS and a single instrument.

When defining/editing, selection must be a LSI type that is appropriate for this entry.

.03 INTERFACE DEVICE {field formerly INTERFACE PORT}

This field contains the entry from the DEVICE file that will be used to communicate with this LSI. An entry in the DEVICE file must exist prior to building or activating the LSI. The entry in the DEVICE file will specify the physical system device that will be used and the communications characteristics of that device.

When defining/editing, selection must be an appropriate entry from the DEVICE file.

.09 DII ERROR MAIL GROUP {*** NEW ***}

This pointer allows the site to specify which mail group is to receive bulletin notification when the system receives an error code/string that is not currently on file for a particular DII interfaced instrument. At the time the unknown error is processed, it will be added to the Auto Instrument file entries for that instrument with a default action code of 2, indicating Display the Error in TAR, but do NOT file the result. The error code/string will also be entered as a new code/string combination in the DII Error Initialization file.

.1 DII INBOUND PROCESS {*** NEW ***}

This field allows the site to specify the name of the GIS Background process that controls the flow of data transfer from the DII LSI to CHCS for a particular LSI file entry.

.11 DII OUTBOUND PROCESS {*** NEW ***}

This field allows the site to specify the name of the GIS Background process that controls the flow of data transfer from CHCS to the DII LSI for a particular LSI file entry.

Menu Path: LAB->LSM->ELA->IIA->LIE
{New &/or updated flds/screens}

```
LAB SYSTEM INTERFACE: HL DII LSI                                    LALSI

 LSI Name: HL DII LSI              Type: LAGIS
 Interface Device:                 Monitor Device:
 Error Device:                     Notify Person: MANAGER,TRAINING
 Read Time-Out:                    Read Terminator:
 Read Maximum:

 DII Parameters:
 DII Inbound Process: LSI DII RECEIVER 1
 DII Outbound Process: LSI DII TRANSMITTER 1
 DII Error Mail Group: DII ERROR LAB MAIL GROUP

 Select AUTO INSTRUMENT:
  +AXSYM
   EKTACHEM
   TDX

Help = HELP       Exit = F10      File/Exit = DO          INSERT OFF
```

3.6.3.3 New DII-related Lab Menu Options.

- DII Error Initialization Inquiry

  Menu Path: LAB->(LLM or LSM)->ILF->III->DEQ

  This option allows an authorized user to display or print information on one or more entries in the DII Error Initialization file. The output contains Error Code entries populated by DII HL-7 message transmissions. A more compact report is provided with the DII Error Initialization File Print Option.

3.6.4 Implementation Issues.

A new Mail Group should be created by DBA to receive DII Error Message bulletins. Depending upon the needs of the site for those bulletins, consideration should be given for division specific mail groups. DII type entries in the Lab System Interface file would subsequently need to be populated correctly with the appropriate mail group for each division. It is NOT recommended that these mail groups be added in the Bulletin file.

After the upgrade, error messages from DII interfaced instruments will begin to display to lab users during TAR as a part of routine operation. These error messages will also begin to populate the DII ERROR INITIALIZATION and the AUTO INSTRUMENT files. In the Auto Instrument file, this instrument generated error message will populate the ERROR CODE and the associated ACTION CODE and ERROR TEXT. The Action Code populated by the

error message is the default, "Display Error/Do Not File". Lab F/T action is required to change this Action Code as needed and enter the User Definable Error Message for each error. The User Definable Error Message field is 'free text' and gives Lab F/T users the means to clarify the error display text and to specify the suitable course of action for the lab user to take when the error is encountered. The Lab F/T interaction will continue until all possible errors have been encountered by the DII interfaced auto instrument and as instrument software upgrades are installed with new and/or different error messages.

3.7 LAB F/T Means to Activate/Inactivate SNOMED AutoEncoding.

3.7.1 Overview of Change.

Sites using CHCS AP can now selectively activate or inactivate (per Lab Work Element) CHCS automatic SNOMED encoding for CHCS AP Result entry. An additional benefit from this enhancement is to enable sites to safely activate changes made in the MORPHOLOGY FIELD, ETIOLOGY FIELD and/or TOPOGRAPHY FIELD files.

3.7.2 Detail of Change.

LAB MENU Path: LAB->LSM->ELA->LSA->LWE Lab Work Element Add/Edit

This new enhancement allows selection based on Lab Work Element. In the LAB WORK ELEMENT (#69.92) file, SNOMED AUTOENCODING is added as a new field (#.19) to permit Lab F/T maintenance users to turn the autoencoder on/off.

If this field is set to INACTIVE for a particular Lab Work Element, autoencoding will be switched off for that work element and when the user is entering results (ERA menu option) the prompt, "Do you want to review SNOMED codes now?" must be answered **YES** in order to manually assign SNOMED codes. If autoencoding is Inactive, the action R)E-CODE DIAGNOSIS TEXT will not display.

If this field is set to INACTIVE for all Lab Work Elements, the ^XBEM global is removed from the system. **{Note: this would be the protocol in case updates to the MORPHOLOGY FIELD, TOPOGRAPHY FIELD and/or ETIOLOGY FIELD files are needed to be autoencoded!}** Then, the very first Lab Work Element to set this field to ACTIVE will trigger CHCS to rebuild this global and the following screen message will display:

```
The SNOMED Encoding global does not exist at this site.  It must be built so the
encoding process can utilize it.  The building of this global impacts system
performance.  For this reason, the encoding global should be built during off-
peak hours.

Requested start time: NOW// T+1@0200

      This should be run between midnight and 6am.
      (The example given will run tomorrow at 0200)

SNOMED Autoencoding queued to run :
SNOMED Autoencoding will be ACTIVE for this work element.
```

Any and all Lab Work Elements subsequently switching over to ACTIVE will not re-trigger re-building this global but will simply turn on the SNOMED autoencoder for their respective work element.

3.7.3 File and Table Change.

(N/A)

3.7.4 Implementation Issues.

(N/A)

3.8 AMA CPT Licensure Message Addition to Reports.

3.8.1 Overview of Change.

A standard AMA CPT Licensure message will print on a separate page immediately before all LAB reports that include CPT codes.

3.8.2 Detail of Change.

The following AMA CPT Licensure message will print on a separate page immediately preceding all standard 80 or 132 column CHCS LAB reports displaying CPT codes contained in the CPT/HCPCS file.

```
"Applicable FARS/DFARS Restrictions Apply to Government Use

Any five digit numeric Physician's Current Procedural Terminology,
(CPT-1995) codes, service descriptions, instructions and/or
guidelines only are copyright 1994 (or such date of publication of
CPT as defined in the federal copyright laws) American Medical
Association.  All rights reserved.
```

> No fee schedules, basic unit values, relative value guides, or related listings are included in CPT. The AMA assumes no responsibility for the consequences attributable to or related to any interpretation of information contained in or not contained in this product. The AMA shall not be deemed to be engaged in the practice of medicine or dispensing medical services."

The specific reports affected and their menu paths are:

MENU PATH:

LAB->LAS->WRM->SDR	Workload Statistics Detail Report
LAB->LAS->TPC	TPC Ancillary CPT Report
LAB->LAS->LMM->DMR	Division MEPRS Report

3.8.3 File and Table Change.

(N/A)

3.8.4 Implementation Issues.

(N/A)

3.9 IPDWC TO DHTI {COPATH} AP (MPL).

3.9.1 Overview of Change.

CHCS Version 4.6 incorporates the Multiple Performing Lab (MPL) enhancement to APCOTS. MPL was delivered as a Change Package in CHCS version 4.52 to all sites prior to deployment of Version 4.6. Detailed documentation on the MPL enhancement is provided in the LAB Implementation Update Guide associated with that release. {Reference: "LAB: Implementation Update Guide, IPDWC TO COMED AP, MPL Enhancement", Document#: DS-IMPL-5000, dated 25 June 1997}

It is important to note that information and guidance pertaining to the installation of this s/w version applies **only** to those sites that are DOD-approved and funded for APCOTS for Anatomic Pathology. Implementation of MPL is granted/coordinated by the CHCS Program Office. Only DOD-specified sites will be able to use the MPL enhancement for Multiple Labs. **Sites not using COPATH for AP do not need to populate fields related to this part of the upgrade.**

3.9.2 Detail of Change.

A detailed reference is provided in the LAB IUG for IPDWC INTERFACE TO COMED AP - MPL Enhancement to APCOTS {Doc# DS-IMPL-5000}.

Summary of new Lab Menu Options: Lab Menu Path(s):

Lab F/T: LAB->LSM->ELA->APA->APE AP Interface Map File Add/Edit
Lab Inq: LAB->LSM->ILF->APO->APQ AP Interface Map File Inquiry
Lab Prt: LAB->LSM->PLF->APN->APW AP Interface Map File Print

Also note there are new fields following the release of 4.5, described below:

3.9.2.1 ACCESSION (#66) file - *** NEW FIELDS ***.

4.02 LOGGED IN WORK ELEMENT {Version 4.51 enhancement}

This field represents the Lab Work Element of the user who logged in the accession. It is used in determining the appropriate CPT CODE modifier to assign when workload is collected. Data contained in this field is system generated, not user entered.

4.03 COPATH SPECIMEN NUMBER

This field contains the CoPath Specimen Number assigned to the accession on the CoPath Anatomic Pathology COTS system.

3.9.2.2 ACCESSION AREA (#68) file - NEW FIELDS {for CoPath}.

2.1 COPATH PREFIX

This field is defined by Lab F/T maintenance. The value defined is selected during specimen processing on CoPath and maintains the CoPath numbering scheme on CHCS. The prefix designates a separate number wheel for sequential numbering on CoPath of all specimens with that prefix.

3.9.2.3 LAB RESULT (#63) file - {CoPath-related FIELDS}.

Within each of the Anatomic Pathology multiples is a new field to receive and store CoPath results (Word Processing field). These fields are mentioned for users writing ad hoc reports.

Fld#	"(MULTIPLE)" -->Sub-Field:	Fld#	Name
21	SURGICAL PATHOLOGY	27	COPATH REPORT (WP)
22	CYTOLOGY GYN	27	COPATH REPORT (WP)
23	AUTOPSY	27	COPATH REPORT (WP)
24	BONE MARROW	27	COPATH REPORT (WP)
25	CYTOLOGY NON-GYN	27	COPATH REPORT (WP)

3.9.3 File and Table Change.

(Reference Doc#: DS-IMPL-5000)

3.9.4 Implementation Issues.

(Reference DOC#: DS-IMPL-5000)

3.10 LAB HOST PLATFORM PARAMETERS (#8700) - **NEW FILE**.

3.10.1 Overview of Change.

The Lab Host Platform Parameters file is used to identify the single CHCS platform which hosts CHCS used by all users in all divisions for all the sites sharing the system. There will be a single unalterable entry allowed in this file. The file will contain data which applies to all divisions, work elements, laboratories, and users for this CHCS platform. The LAB MTF (#69.9) is replaced by the LAB HOST PLATFORM PARAMETERS file.

The Lab Host Platform Parameters Edit option includes a field to specify where e-mail bulletins are to be sent to flag a discrepancy between the current blood type stored in the Patient file and the new blood type. The Blood Type data and the source of the data will be transmitted to the Defense Enrollment Eligibility Reporting System (DEERS) from the CHCS Patient file. 4.6 enhancements also include the means to process this information using a non-DBSS lab test for ABO/RH type resulting.

3.10.2 Detail of Change.

The Lab Host Platform Parameters file is populated with the ^DD("SITE") by conversion. When changes are made to the Host Parameter Name (DBA functionality), the Lab Host Platform Parameters file will be updated automatically with the Internal Entry Number (IEN) of the new entry.

Since version 4.6 displaces the need for the Lab MTF (#69.9) file, the following details are provided concerning the data contained in this file.

- Lab menu options for F/T maintenance and lab file inquiry involving the Lab MTF file have been replaced and reference the Lab Host Platform Parameters file.

- Data maintained in the fields "AP COTS ACTIVATION" and "Sensitive Results POC" will be moved to the LAB HOST PLATFORM PARAMETERS file. If multiple entries exist for AP COTS ACTIVATION, the earliest date will be selected and moved to populate the new file. The FileMan Enter/Edit option is still required to initially define the AP COTS ACTIVATION date field.

- The field to define the Exception Report Device has been moved to the Lab Division file and sites will be able to specify printers by Division.

- Obsolete fields in the Lab MTF file (IRR Window and Lab Transmittal Slip) will be deleted.

This upgrade enables Lab F/T users to define and designate a non-DBSS laboratory BLOOD GROUP & TYPE test for ordering and resulting on CHCS {not DBSS} that will be used by CHCS to populate the Blood Type field in the PATIENT file. This test and lab method must initially be created on CHCS using standard Lab F/T menu option pathways. Specifics are detailed in section 3.10.3 for this CHCS resultable test.

Differences in results between the current blood type stored in the Patient file and the new blood type as being reported from either DBSS or CHCS will trigger a discrepancy bulletin. Version 4.6 provides a laboratory F/T maintenance menu option to specify the bulletin destination(s) to specific user(s), mail group(s) and/or device(s).

This table shows data handling logic of Blood Type Updates and resultant actions based on SOURCE. Note: DBSS is always considered the correct source over CHCS.

Source in file	**Source of update**	**Status**	**Action**
DBSS	DBSS	same type	none
DBSS	DBSS	different	overwrite/send bulletin/msg to DEERS
DBSS	CHCS	same type	none
DBSS	CHCS	different	send bulletin
CHCS	CHCS	same	none
CHCS	CHCS	different	overwrite/send bulletin/msg to DEERS
CHCS	DBSS	same	update source to DBSS/msg to DEERS
CHCS	DBSS	different	overwrite/send bulletin/msg to DEERS

Certified new results will replace EXISTING RESULT and SOURCE in PATIENT file, ONLY IF the existing source was from CHCS {CHCS WILL NOT REPLACE DBSS sourced results}. A DISCREPANCY BULLETIN triggers if RESULT DIFFERS from the Pre-Existing Result in the PATIENT FILE.

This bulletin will state if results have been replaced.

The following screen displays to a Lab user entering results on CHCS where the new result is different from the previously stored (CHCS) result in the Lab Result file.

```
ROBERTSON,ISAIAH       20/555-44-3321     M/53       ph#
BLOOD/BLOOD              ROUTINE        Req Loc: INTERNAL MED
Collected: 11 Aug 1997@1443        Received: 11 Aug 1997@1443
Accession: 970811 BBP 3                   HCP: SMITHERS,ALANON

CHCS BLOOD TYPE                        A NEG

WARNING: Previous result AB NEG on 9 Aug 1997@1506
     Do you wish to proceed with this new result? NO//
```

If the user accepts the default of "NO", the "Edit Results or Quit" prompt will be presented.

If the user responds "Y"es, the "Certify, File or Edit Results or Quit E//" prompt will be presented. When certified, the Blood Type and Source of CHCS will be sent to the Patient file.

3.10.3 File and Table Change.

To accommodate this update, the LAB HOST PLATFORM PARAMETERS (#8700) file and the BLOOD TYPE BULLETIN RECIPIENTS (#8713) file were created and their structures are presented:

3.10.3.1 File structure.

- LAB HOST PLATFORM PARAMETERS (#8700) file:

```
FLD
NBR   FIELD NAME                          NOTES
=================================================================
.01   HOST MTF                                NOT EDITABLE
1     AP COTS ACTIVATION DATE                 ENTRY VIA FM Enter/Edit only
2     SENSITIVE RESULTS POC  (mult)           LAB->LSM->ELA->LSA->LHP
3     CHCS BLOOD TYPE TEST NAME               LAB->LSM->ELA->LSA->LHP
```

- BLOOD TYPE BULLETIN RECIPIENTS (#8713) file:

```
FLD
NBR   FIELD NAME                          NOTES
=================================================================
.01  BULLETIN RECIPIENT  (mult)      LAB->LSM->ELA->LSA->LHP
```

{Ad Hoc & F/T note: this file (#8713) is populated by a lab F/T menu path to edit the Lab Host Platform Parameters (#8700) file!}

3.10.3.2 New Lab F/T Maintenance Menu Option.

LAB MENU PATH:
LAB->LSM->ELA->LSA->LHP Lab Host Platform Parameters Edit

```
   LAB HOST PLATFORM PARAMETERS                                LAB HPP EDIT

   Name: TRAINING MEDICAL TREATMENT FACILITY
   Select Sensitive Results POC:
     SMITHERS,CHRIS


   Select CHCS Blood Type Test Name: ?
```

```
 Answer with LAB TEST LAB TEST IN PANEL, or SPECIAL LAB HANDLING, or NAME

        (M)ore help, (L)ist of values, or (Q)uit? M
```

Select CHCS Blood Type Test Name: {continued}

```
This field contains the name of the test which will be used to send the Patient
Blood Type to the CHCS Patient file and to DEERS.

The fields in the Lab Test file must be populated this way:

Name: cannot be ABO/RH
Synonym: may not contain a synonym of ABO/RH
    NOTE: The test name and synonym of ABO/RH are reserved for Blood
    Bank tests that are resulted on DBSS.

Single/Panel: SINGLE              Subscript: CLINICAL CHEMISTRY
Result Type:  SET OF CODES        Type: BOTH

The Method(s) must contain each of the 8 result codes exactly as presented
below.  Method(s) may be defined at the Lab Work Element level to allow
differences in the expansions specified.

Codes are:         A NEG     B NEG    O NEG     AB NEG
                   A POS     B POS    O POS     AB POS
```

```
LAB HOST PLATFORM PARAMETERS                                LAB HPP EDIT

Name: TRAINING MEDICAL TREATMENT FACILITY
Select Sensitive Results POC:
  SMITHERS,CHRIS


Select CHCS Blood Type Test Name: CHCS Blood Type

Select Blood Type Bulletin Recipient:
  ??
```

```
Enter:
       U.EntryName to select USER EntryName
       D.EntryName to select DEVICE EntryName
       G.EntryName to select MAIL GROUP EntryName

To see the entries in any particular file, type <Prefix.?>
If you simply enter a name then the system will search each of the above files
for the name you have entered.  If a match is found the system will ask you if
it is the entry that you desire.

However, if you know the file the entry should be in, then you can speed
processing by using the following syntax to select the entry:
     <Prefix>.<entry name>     or
     <File Name>.<entry name>

This field contains the user(s), device(s), and/or mail group(s) that will
receive a MailMan bulletin when there is a discrepancy in the Patient Blood
Type stored in the Patient file and a new Blood Type that is being sent to the
Patient file. The bulletin will also be issued if the data being passed cannot
be matched to an entry in the Patient file.
```

3.10.3.3 New Lab Files Inquiry Menu Option.

LAB MENU PATH(s):
LAB->LSM->ILF->LSO->HPI Lab Host Platform Parameters Inquiry
LAB->LLM->ILF->LSO->HPI Lab Host Platform Parameters Inquiry

3.10.4 Implementation Issues.

For any site needing to activate APCOTS, FileMan Enter/Edit is still required, but this is now done by accessing file #8700. This can only be done once, and since the process is irreversible, this action needs to be handled with **utmost thoughtfulness**.

For each Lab Division DBSS site, the determination will need to be made concerning appropriate entries to receive the Blood Type Bulletin. Keep in mind that Mail Users and Groups may be division specific and Device file entries are MTF-wide.

If not already defined, a {non-DBSS} laboratory test can be created for CHCS result entry of a patient's Blood Group and Rh Type. The name of this test can be entered in the Lab Host Platform Parameters file. As this test will be shared system-wide, sites will need to reach an agreement for the name.

Note, if existing CH subscript tests already exist, caution needs to be exercised to ensure that test replacements do not compromise existing ORDER SETS. If an order set is defined with an existing lab test that is going to be inactivated, the order set will need to be edited to delete the old test and to add the new one.

One final note is that certain characters (symbols) may need to be avoided when defining the name of the new test. For example, if "&", "\", or "+" are incorporated into the test name, the result will not be received into CliniComp.

3.11 Blood Bank - Custom Lab Labels.

3.11.1 Overview of Change.

This enhancement adds new entries in the Label Fields file to allow their use for defining custom Laboratory labels for the following DBSS Blood Bank Tests: TYPE AND SCREEN, TYPE AND CROSS, and AUTOLOGOUS DONATION. The new entries are all Order Entry fields.

3.11.2 Detail of Change.

An alpha list of the new entries in the Label Fields file are:

DATE OF LAST TRANSFUSION
DATE OF PREGNANCY
HEMOLYTIC DISEASE OF NEWBORN
HIST OF ANTIBODY FORMATION
HIST OF TRANSFUSION
HIST OF TRANSFUSION REACTION
HOSPITAL LOC OF TRANSFUSION
LOC OF INTENDED TRANSFUSION
PREVIOUS/CURRENT PREGNANCY
PRIOR RHIG TREATMENT
PRODUCT TYPE/NUMBER OF UNITS
REASON FOR TRANSFUSION
RHIG TREATMENT DATE
SUBSTITUTIONS ALLOWED
TRANSFUSION DATE/TIME NEEDED

3.11.3 File and Table Change.

The new fields are available for assignment to the label format at the "Print Control Fields" and "Display Name" prompts. Standard Lab F/T Maintenance Menu Pathways and Protocol are to be followed when establishing new lab labels **(=> No changes)**:

MENU PATH: LAB->LSM->ELA->BLE->LFF (Label Design File Add/ Edit)

As the LABEL DESCRIPTION and LABEL STOCK are already defined, if desired the user can use the LFF menu option to create a custom label for DBSS Blood Bank labels. Once defined, the newly created Label Design can be used as an entry for a DBSS (BB Subscripted) Accession Area, by either of these Lab F/T maintenance menu paths:

(1) LAB->LSM->ELA->LSA->AAE Accession Area Add/Edit

or

(2) LAB->LSM->ELA->EEF Enter or Edit File Entries
Input to what FILE: 68
Edit which FIELD: ALL// PRINTER LABEL DESIGN
Then edit FIELD: <CR>
Select ACCESSION AREA: {Enter Name of BB subscripted AA}
PRINTER LABEL DESIGN: CHCS LAB PRIMARY LABEL// {Enter Name of new label}

3.11.4 Implementation Issues.

(N/A)

3.12 CPT Codes/Modifiers Inclusion in HL7 Messages.

3.12.1 Overview of Change.

This enhancement encompasses all functional areas of the clinical laboratory and enables CPT Codes and modifiers to be added to the lab test result HL7 message for transmission to all interfaced systems receiving lab test result HL7 messages (e.g.: CEIS, MHCMIS). As a note, when the Laboratory MEC option is used to correct workload counts, a HL7 message is triggered to the CEIS interface to notify of additions, removals and changes to CPT Codes and Modifiers.

3.12.2 Detail of Change.

When a Laboratory test is certified or amended, result HL7 messages are created that include patient identification, specimen information and test results. This enhancement incorporates the Lab test associated CPT Code(s) and Modifier(s) to this message.

3.12.3 File and Table Change.

(N/A)

3.12.4 Implementation Issues.

(N/A)

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APPENDIX A:

GENERIC/COMMON FILE CHANGES

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A.1 SUMMARY OUTLINE.

This Section provides a brief summary of the software changes in CHCS Version 4.6 from baseline CHCS Version 4.5 which affect CHCS common files.

A.1.1 UIC TOTAL SOLUTION.

The ability for users to use free text to designate a Station/unit in mini and full registrations (The "Use as is?" option) has led to a number of coding and data inconsistencies across all of CHCS. Changes have been made to force users to select entries which are contained within the Unit Identification Code file. In addition, a conversion has been written to try to convert all of the free text entries to valid entries. Many new options have been developed to maintain the UIC file and make it easier for users to select an appropriate Unit for patients.

A.1.2 MTF DATA NO LONGER SUPPORTED.

The Medical Treatment Facility (MTF) File has been used historically in CHCS to designate the Medical Treatment Facilities belonging to the Department of Defense and other facilities with which they associate. As such, entries in this Class 1 file have been used throughout the software to not only designate individual facilities but to also designate the CHCS platform at an individual site. This file will now be editable. Sites will no longer have to choose a value from this file to define their site, instead they will be able to create a "Host Platform Name".

A.1.3 PROVIDER AND PLACE OF CARE INACTIVATION.

CHCS presently allows authorized CHCS users to inactivate providers and hospital locations by more than one method. CHCS will now maintain consistency when inactivating a provider either by entering an inactivation date in the Provider file, or when DBA-Inactivating Providers. There will also be consistency for the inactivation of Hospital Locations.

A.1.4 E-LEVEL MEPRS EDIT.

CHCS will prevent the entry of an inappropriate requesting location in the DEFAULT LOCATION field in the User Order-Entry Preferences option and in the LOCATION field in the Provider file.

CHCS will also produce two new reports to identify discrepancies for existing data in the Hospital Location file. One report lists hospital locations, when the Group IDs for the location and the location's MEPRS code are not equal. The second report lists hospital locations that have an inappropriate MEPRS code based on the Location Type.

A.1.5 MEPRS PARENT ADDED TO DMIS ID FILE.

SAIC will modify the CHCS DMIS ID Codes file #8103 to include all fields currently provided in the source data file which CHCS receives. CHCS will be modified to use the MEPRS (EAS) PARENT field (new) to determine if a division's workload is eligible for Workload Assignment Module (WAM) workload reporting.

A.1.6 CHANGES TO SUPPORT APV.

When patients are surgically treated and released within twenty-four hours, workload reporting is processed as outpatient workload under the new category entitled "Ambulatory Procedure Visit" (APV). This enhancement requires that the Ambulatory Procedure Units (APU) be set up as unique hospital locations. These APUs have a location type of "Ambulatory Procedure Unit," that replaces the existing "Same Day Surgery" location type.

When defining MEPRS Codes, the system allows the user to flag the appropriate MEPRS Codes as APU MEPRS codes. Additionally, the system allows the user to define the corresponding DGA* MEPRS Code for hospital locations defined as "Ambulatory procedure units" that also utilize an "APU" MEPRS code. This will enable CHCS to record minutes of service for APV workload, and attribute it to the appropriate MEPRS code.

If the patient's APV encounter requires an inpatient admission, the system allows the user to assign the new corresponding Source of Admission Code, "APA - Admission Resulting from APV."

A.1.7 REVISE PROVIDER SCREENS AND PROVIDER FILE.

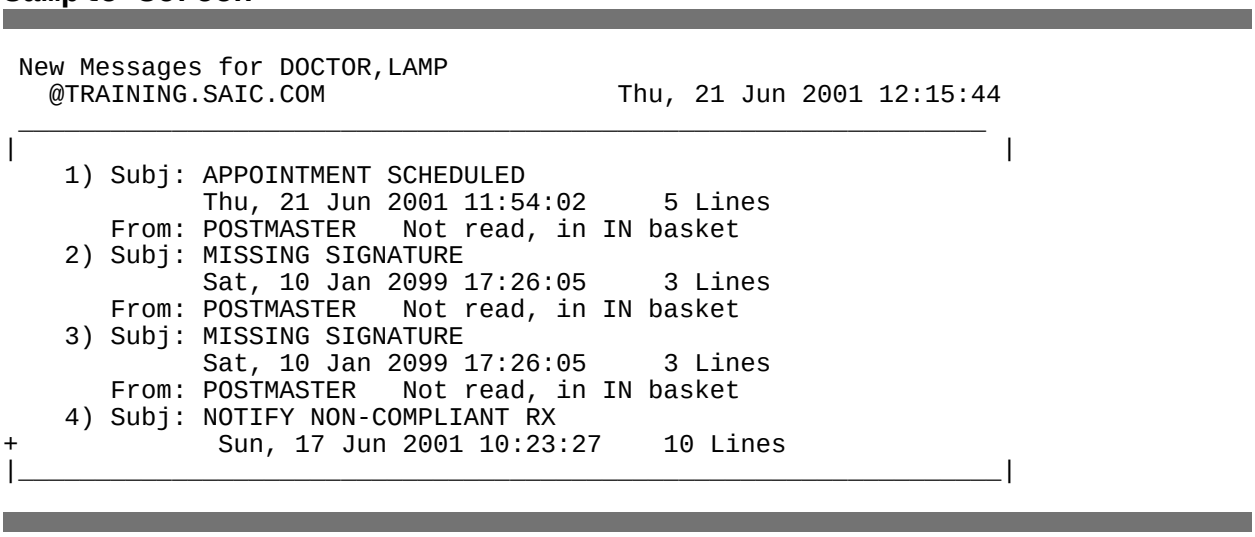
This change redesigns the Provider File Enter/Edit screens and removes obsolete data elements from the provider file. Obsolete data elements have been removed from the provider screens and remaining elements have been rearranged for a more logical grouping.

MailMan Enhancements

The List New Messages (LNM) option on the CHCS user's Mailman menu now offers the user a window screen format for viewing and selecting messages and responses to read. This window allows the user to scroll through back and forth through the list to decide which messages to read. Press the select key, only, next to the subject and the message will display. Once the user is finished reading the message and chooses a Message Action the new message window will return for the user to select another message.

Scrolling options include the standard uses of the up or down cursor keys, the [F7] key for bottom of the list, the [F8] key for top of the list and the NextPage/Previous Page keys.

Sample Screen



```
 New Messages for DOCTOR,LAMP
   @TRAINING.SAIC.COM                    Thu, 21 Jun 2001 12:15:44
 ____________________________________________________________________
|                                                                    |
    1) Subj: APPOINTMENT SCHEDULED
             Thu, 21 Jun 2001 11:54:02     5 Lines
       From: POSTMASTER   Not read, in IN basket
    2) Subj: MISSING SIGNATURE
             Sat, 10 Jan 2099 17:26:05     3 Lines
       From: POSTMASTER   Not read, in IN basket
    3) Subj: MISSING SIGNATURE
             Sat, 10 Jan 2099 17:26:05     3 Lines
       From: POSTMASTER   Not read, in IN basket
    4) Subj: NOTIFY NON-COMPLIANT RX
+            Sun, 17 Jun 2001 10:23:27    10 Lines
|____________________________________________________________________|
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APPENDIX B:

MASTER CHECKLIST

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TABLE OF CONTENTS

GENERIC CHECKLIST ITEMS FOR ALL USERS

B.1 USER TRAINING.

B.1.1 CLN.

It is recommended the site request Implementation Support for training and user assistance in the new clinical enhancements for this activation.

It is recommended that HCP-level users (Classes 2-4) and Nurse/Clerk-level users (Class 0-1) attend separate demonstrations for clinical enhancements that will be utilized.

Training sessions should include a brief introduction demo covering the Inappropriate Requesting Location changes, and an overview of the Transportable Patient Records, Duty Station and UIC enhancements. Classes should be organized to include the topics below.

HCP-Level users: (Determine length of class by topics)

Introduction Demo	(15 min)
Progress Notes	(30 min)
Discharge Summaries	(30 min)
Problem Lists	(30 min)
Consult Results	(1 hour)
APV Order Entry	(30 min)

Nurse/Clerk-Level users: (Determine length of class by topics)

Introduction Demo	(15 min)
Progress Notes	(15 min)
Discharge Summary	(30 min)
Problem Lists	(15 min)
Consult Results	(1 hour)
APV Order Entry	(15 min)
Immunization Enter/Review (Nurse-level)	(30 min)
Nursing Due Lists	(1 hour)

It is recommended that supervisory personnel, responsible for File and Table maintenance, attend a separate demo to cover the requirements for Progress Notes, Immunizations, Clinical Site Parameters, Consult Procedures, Discharge Summaries and Transportable Patient Records. Transportable Patient Records training is not covered in the core classes.

It is recommended that users who will be responsible for entering APV Minutes of Service attend the PAS demonstration covering this option.

B.1.2 COMMON FILES.

It is recommended that Data Base Administrators attend a two hour demo.

B.1.3 LAB .

There are two LAB IUG documents to reference for this upgrade:

(a) IPDWC Interface to COMED AP: MPL Enhancement DS-IMPL-5000
(b) This IUG: Upgrade to CHCS Version 4.6

A 1.5 hr. demo of general 4.6 changes is recommended for Lab Supervisory Personnel prior to activation. The familiarization training plan is recommended as an alternative if a demo is not possible.

If APCOTS is not ACTIVATED or if the MPL enhancement has already been implemented, a 2 to 3 hour block of time for demo or self study is estimated for a user familiar with CHCS Lab F/T maintenance to prepare for this upgrade. Sites without users familiar with Lab F/T maintenance have two logical choices, (1) subscribe to standard CHCS training {est. 2-3 days} or (2) request onsite outside assistance.

If the site is preparing to activate APCOTS, an additional 2-3 hours is recommended for demo and to answer site questions.

Attendance: Lab KEY POC's: Managers, F/T maintenance, Anatomic Pathology, senior supervisory personnel, Quality Assurance and Lab Trainers.

B.1.4 MCP.

USE CURRENT END ELIG DATE TO DETERMINE AD DISENROLLMENT

1. MCP Supervisors, MCP F/T personnel -Screen #1 of change	5 min demo Handout

SET PCM CAPACITY FOR MEDICARE ENROLLEES

1. Enrollment Clerks	Demo	15 mins
2. MCP Supervisors & F/T personnel (includes Enr clerk's demo)	"	30 mins
3. Systems/MCP Sup./F&T personnel Handout: Exception Report		

LIST ONLY PCM GROUP MEMBERS IN HELP TEXT

1. MCP Booking Clerks	15 mins
2. Health Care Finders	15 mins
3. MCP Supervisors	15 mins

DISPLAY DEERS INFO IN MTF BOOKING FOR MEMBERS NOT ENROLLED

1. All Users	Handout of the new screens ...

AUTOMATIC ELIGIBILTY CHECK FOR CONDITIONAL ENROLLMENT

1. MCP SUPEVRVISORS	Handout - This Change

AD ASSIGNMENT TO EXTERNAL PCM

1. Tricare Enrollment Clerks	15 mins
2. Tricare/MCP Supervisors	30 mins
3. MCP F/T personnel	60 mins

(Class for F/T includes Clerks & Supervisors demo)

PROVIDER PLACE OF CARE INACTIVATION

1. PAS and MCP Supervisors	30 mins

UIC TOTAL SOLUTION

1. MCP Clerks	15 mins
2. DBA Common Files	Refer to CF IUG

EBC

Refer to EBC IUG.

B.1.5 PAD/MSA.

It is recommended that PAD supervisors attend the 1 hour supervisory demo plus the 1.5 hour clerk/general user demo. MSA supervisors and clerks should attend the 1 hour MSA demo.

B.1.6 PAS.

A 2 hour demo is recommended (1 hour for APV users; 1 hour for other PAS users), to be attended by Facility Trainers, Booking personnel, Clinic Supervisors, and PAS file and table POCs.

(See MCP section as well. Sites using MCP may want to combine demos) it combined, schedule a 3 hr. time slot.

B.1.7 PHR.

The time required for training may vary from site to site depending on the functions utilized. Bar Code, the Dispensing Option Enhancement and/or Quick Dispense are optional. The latter two are dependent upon the use of the Ver 4.5 Dispensing Option. If the site chooses not to use any of these, then the remaining changes, except for RX Number Consistency and FDB III, are either passive in nature or will affect supervisory personnel only.

A 1 hour demo is recommended for familiarization training. An additional hour is estimated to demo the Dispensing Option Enhancement, Quick Dispense, and Bar Code changes.

B.1.8 RAD.

RAD USERS: File and Table supervisors should attend a two-hour training demonstration for both modifications to the Print Pull List and Scheduling Parameters Modifications. Both will require file and table maintenance.

File room personnel should attend a one-half hour demonstration on the new Print Pull List option.

B.1.9 MRT.

PAD USERS: Users who are responsible for retiring records to NPRC or transferring records within their CHCS network should attend a two-hour functionality demo/training. This would include all PAD POCs, file room supervisors and personnel responsible for performing transfer/retire tasks.

PAD USERS: If MRT clerks will be creating APV records, they should be available for an APV record creation demonstration of about 30 minutes.

PAS/MCP USERS: If PAS supervisors are going to create a file room for APV records, they need one on one training (if they do not know how to create a file room) of about 30 minutes.

SITE MANAGERS and SYSTEM SPECIALISTS: It is recommended that site personnel responsible for formatting the Record Index/Shipment Data File to ASCII attend a one on one demo of about 30 minutes.

B.2 IMPLEMENTATION ISSUES.

B.2.1 CLN.

Before the Install:

____ 1. It is recommended that the site assess the way they are currently using Consult Orders and determine whether the Consult Results option will be used. Gather data for the File and Table build to be entered post load to include Consult Names and type; Consulting Clinics and Providers; Devices, etc.)

____ 2. It is recommended that the site gather data related to the Ambulatory Procedure Units that are currently in use for File and Table build post load. Coordination with PAS, PAD, MEPRS and Systems Admin is required for this effort.

____ 3. The site should establish what pre-positioned data will be entered for Patient Instructions and Discharge Summary Text to support the Discharge Summary enhancements. Patient Instructions can be entered before the load.

____ 4. It is highly recommended that the site appoint a contact person for Immunization file and table build. This information should be available post load for all immunization file and table requirements.

Post Install:

___ Communicate with other areas and verify that all APV File and Table has been completed before use of this option can be implemented.

___ Assign the necessary security keys for Patient Notes, Consults, transportable records and APV order entry.

___ Identify personnel for each clinic to be responsible for the Problem Selection List entries if this enhancement will be utilized on site.

___ Decide how the Transportable Patient Records options will be utilized at the site.

B.2.2 COMMON FILES.

Pre Load:

___ A meeting must take place between the different sites on the CHCS system to determine if a host platform will be defined and, if so, what values will be used.

___ A meeting must take place between the Data Base administrator and the MEPRS office to determine which MEPRS codes will need to have the "APU Flag:" set to YES and DGA* MEPRS that the APU locations will be linked to.

Post load:

___ In the case of hospital locations with inappropriate MEPRS codes, a determination will need to be made as to who uses the location if anyone. If no one uses the location, it should be inactivated. If the location is being used or orders are being made using it as a requesting location then a determination should be made as to what MEPRS code it should be using and whether the "Location Type" is correct.

___ Hospital Locations with the MEPRS code or Cost pool Code inconsistent with the Group ID of the hospital location will need to be fixed. All divisions on the data base need to address this issue.

___ For the APV project, the building of APV MEPRS codes and APU Locations must be complete before other sub systems can do their file and table builds.

B.2.3 LAB.

___ Quality Control Report Menu Option Enhancements

Verify that Quality Controls are defined with a Lab Section. Note that this field in the Quality Control file is not required for defining a Quality Control Specimen ... but is needed for this new enhancement to work properly!

___ LAB HOST PLATFORM PARAMETERS (#8700) - **NEW FILE**

For any site needing to activate APCOTS, FileMan Enter/Edit is still required, but this is now done by accessing file #8700 instead of the LAB MTF (#69.9) file.

___ DBSS activation

(1) The CHCS Program Office will direct when/which sites can activate DBSS. This is not a site decision.

(2) In terms of technical requirements, to support this interface, the minimum DBSS S/W version is 2.01.

(3) Recipients to receive discrepancy BLOOD TYPE bulletin:

For each Lab Division DBSS site, the determination will need to be made concerning appropriate entries to receive the Blood Type Bulletin, bearing in mind that Mail Users and Groups may be division specific and Device file entries are MTF-wide.

___ CHCS BLOOD TYPE TEST

If not already defined, a {non-DBSS} laboratory test can be created for CHCS result entry of a patient's Blood Group and Rh Type. The name of this test can be entered in the Lab Host Platform Parameters file. As this test will be shared system-wide, sites will need to reach an agreement for the name.

Note, if existing CH subscript tests already exist, caution needs to be exercised to ensure that test replacements do not compromise existing ORDER SETS. If an order set is defined with an existing lab test that is going to be inactivated, the order set will need to be edited to delete the old test and to add the new one.

One final note is that certain characters (symbols) may need to be avoided when defining the name of the new test. For example, if "&", "\", or "+" are incorporated into the test name, the result will not be received into CliniComp.

___ DAC Results Report {Amended Results}

As a result of version 4.6 s/w changes, laboratory results amended before the upgrade will not be captured on the DAC report for Amended Results. Since this historical data will not be available after the upgrade, it is suggested that Lab Managers (in each Lab Work Element) print the standard DAC report for Amended Results if this report is presently being used/monitored by QA. If this is done on a daily basis for

the week preceding the upgrade, then on the day prior to the upgrade, there will be only one days worth of data to be compiled and printed {and the report should complete quickly}.

___ DII/LSI Interface

A new Mail Group should be created by DBA to receive DII Error Message bulletins. Depending upon the needs of the site for those bulletins, consideration should be given for division specific mail groups. DII type entries in the Lab System Interface file would subsequently need to be populated correctly with the appropriate mail group for each division. It is NOT recommended that these mail groups be added in the Bulletin file.

After the upgrade, error messages from DII interfaced instruments will begin to display to lab users during TAR as a part of routine operation. These error messages will also begin to populate the DII ERROR INITIALIZATION and the AUTO INSTRUMENT files. In the Auto Instrument file, this instrument generated error message will populate the ERROR CODE and the associated ACTION CODE and ERROR TEXT. The Action Code populated by the error message is the default, "Display Error/Do Not File". Lab F/T action is required to change this Action Code as needed and enter the User Definable Error Message for each error. The User Definable Error Message field is 'free text' and gives Lab F/T users the means to clarify the error display text and to specify the suitable course of action for the lab user to take when the error is encountered. The Lab F/T interaction will continue until all possible errors have been encountered by the DII interfaced auto instrument and as instrument software upgrades are installed with new and/or different error messages.

___ Routine preparations for version upgrades are done:

Verify there are no outstanding Transmittal Lists, Collection Lists and Work Documents. One of the enhancements of version 4.6 is SIR 14744, which establishes an upper limit on batches as 9999. Any Work Document batches greater than 9999 will not be accessible after the load. Even though a laboratory may have work document batch #'s less than 9999, it is still recommended that all work documents are unloaded as a normal precaution prior to the upgrade.

B.2.4 MCP.

USE CURRENT END ELIG DATE TO DETERMINE AD DISENROLLMENT

POST LOAD

___ Decide on the Grace Period for AD enrolled patients and set the parameter via menu option PARA.

SET PCM CAPACITY FOR MEDICARE ENROLLEES

POST-LOAD

___ Print the Exception Report BENFICIARY CATEGORY/PATIENT CATEGORY DISCREPANCY REPORT.

___ Review the report to correct Patient Categories or registration.

___ Review PCM Groups and revises PCM capacities as needed.

AD ASSIGNMENT TO EXTERNAL PCM

Pre-Load:

___ Determine which external PCMs will be allowed ACTIVE DUTY patients and establish capacities.

Post-Load:

___ Review all external PCMs with agreements of NET and SUP.

___ Define AD capacities for these providers if limit .....

___ Assign new Security Key to appropriate users (sec 2.5).

PROVIDER PLACE OF CARE INACTIVATION

___ CHCS users (i.e., PAS Supervisors, and Managed Care Supervisors) will use the system as they do presently to inactivate and reactivate PAS providers and clinics and MCP providers and places of care. The end result is the same. The process in achieving the end is different.

UIC TOTAL SOLUTION

Pre-Load:

___ Ensure all registrations are correct when feasible

Post-Load:

___ DBA should review reports to correct registrations.

B.2.5 PAD/MSA.

Before the install:

___ Run the MSA and TPC Active Accounts Receivables (AAR) the day prior to the software load.

___ Run the MSA Balance Check two days prior to the software load and log a Support Center Call for any problem accounts.

___ Sites can make good use of Post Master Mailman Messages in order to emphasize key changes which will affect the users after the software load, i.e.: MASCAL Phase II, DD7A Functions, Station/Unit Code Changes, etc.

___ Sites who want to create a DD7A Billing Report for the month during which CHCS version 4.6 is loaded, should take steps to record all applicable outpatient visits which can then be added to the report via the DD7A Monthly Outpatient Billing Process (MBP).

___ Sites may want to run off all templates for Ad Hocs created to support the MASCAL Functionality.

During the install:

___ Track all PAD/MSA activity to be backloaded when the system is returned to the users.

B.2.6 PAS.

___ Sites need to define the HOST PLATFORM NAME, but don't need to do so until after the installation of Version 4.6.

___ File and Table personnel need to review the clinic profiles to ensure they are set up with the correct service.

___ The Service Type file must be populated through BFIL.

___ PAS clinic and provider profiles, templates and schedules must be created and maintained for each APV clinic.

B.2.7 PHR.

If a site plans on using Bar Code:

___ Before deciding to implement Bar Code on all printers, users should plan on a trial period using a limited number. Bar Coded label generation by Datasouth printers will take significantly longer than they are accustomed to(three times as long). And, even if the site has acquired an Intermec printer exclusively for Bar Code, a non-bar coding printer should be kept available for a period of time.

If a site plans on using Dispensing software:

___ It is likely that most sites will have delayed implementing Dispensing Option (Ver 4.5) awaiting the availability of Bar Code. At those sites where this is true, it would probably be prudent to not enable Dispensing Option/Dispensing Option Enhancement II and Quick Dispense until the Bar Code trial has been completed and the label generation time increase has been evaluated by the site.

___ Pharmacy users should be encouraged to mark RXs noncompliant via the DRX option rather than via Noncompliance Data (NON). This will combine multiple RXs for the same patient into one mail message. If this is done via NON, one message will be generated for each RX.

Dispensing Option/Dispensing Option Enhancement and Quick Dispense are enabled at the Division level. It is either on or off for all outpatient sites in a particular division.

___ Caution sites that disabling dispensing software will permanently erase dispensing data recorded to that point.

B.2.8 RAD.

___ Schedule templates will require modification prior to implementing 24-hour scheduling.

___ Existing labels will require re-formatting if new print fields will be implemented.

___ Clinics requiring Radiology to pull records for SCHEDULED APPOINTMENTS MUST be in the BORROWERS SET-UP FILE.

B.2.9 MRT.

PRE-LOAD

___ It is recommended that old retirement indices be deleted prior to V4.6, as they cannot be deleted once V4.6 has been loaded.

___ Review current record types in the Type of Record Setup. Decide if any new record types need to be created. The PAD POC should check with other divisions prior to the load to see if they will use any new record types and either enter that information into the files or have the individual division POC's enter that into the files after the load.

___ Will PAD or PAS be creating APV records? The APV record must be created using the Create APV menu options from the PAS menu to ensure that the APV record is linked to the ambulatory procedure itself. If APV records are created through the PAD CV option, they will not be tied to the PAS appointment and the APV record tracking number will not be assigned. It must be decided who will create the APV records and if PAD will do so the APV menu can be assigned as a secondary menu.

POST-LOAD

___ Any medical record stored in a file room which does not have a corresponding electronic entry on CHCS MUST be entered onto CHCS or retired using the current manual process.

If there is no electronic record on CHCS and the site wishes to use CHCS to retire these records:

Access the 'Record Initialization' Menu:

1. PAD -> MRM -> TM -> OR -> CB {Create/Edit Batch Lists}
2. Enter patient's name for whom there is no record
3. Record creation date can be 'back-dated' to indicate when the patient was last seen at the MTF. The retire list searches the last patient activity date to put records on the list.
4. Then, PAD -> MRM -> TM -> OR -> NR {Create New Records/Print Labels}

You should now be able to create electronic retire lists using the appropriate search dates. When the RECORD INDEX is created using the Transfer-Retire menu, it will now include these records as eligible to retire.

___ Many facilities have been retiring records electronically on CHCS prior to this software upgrade. If those sites wish to create or recreate a retirement list for those records, the actions listed below can be taken. It will be up to the POC to evaluate how records have been retired and if they desire to do any cleanup.

There have been a number of ways that sites have retired records. Depending on which method was used, the following actions can be taken:

o If records were retired using: MRM-FE-PR
Movement type = Inactivate

No further action is required.

o If records were retired using: MRM-FE-PR
Movement type = Move to Another file area and you've indicated NPRC as an 'Additional MTF' in your files:

Then generate an ADHOC (see software specialist) where 'current borrower' = the NPRC and Home Division = unknown. There has been a software error which sends these record into limbo because of the 'unknown' division. Now have software specialist use FileMan Enter/Edit and input the correct Home Division for those records. Those records will then show when doing an inquiry and the NPRC will be the destination.

o If records were retired using: MRM-TM-TR (Transfer to Other MTF)

No further action should be required.

o If records were retired using: MRM-TM-AC (Inactivate/reactivate Records).

No further action should be required.

o If records were retired using: MRM-TM-MR (Move Records to Other File room).

Just access the file room where those records are located and generate a Retire list.

___ When records are added to the Record Index, they are added to the bottom of the list. If records are added AFTER box numbers have been assigned, those records will automatically be assigned to the last box number on the list. Current NPRC policy requires that all records be filed according to

the SSN within boxes. However, Record Indices are easily deleted and can be re-generated so box numbers can be re-assigned.

___ When a Record Index is generated for the retirement of records and the associated Shipment Data File is NOT created, the system will allow the user to SEND the Record Index which will update the record status to RETIRE RECORD. However, under these circumstances, the NOTIFY action is not available and the ASCII fill will not be created.

___ Clinics requiring Medical Records for SCHEDULED APPOINTMENTS MUST be in the BORROWERS SET-UP FILE:

Menu Path: PAD Main Menu->MRM->{file room}->SD->BSU->Select BORROWER:

___ To add clinics to pull list functions so that pull lists can be generated by provider, the RECORD TYPE NEEDED: field in the Borrowers Setup File MUST be populated with the RECORD TYPE needed when 'Record Requests are made when making appointments.

Menu Path: PAD Main Menu->MRM->{file room}->SD->BSU->Select BORROWER: Input Clinic here. At the Records needed field: add appropriate record to be pulled.

___ PAD POC's need to check with POC's from all divisions to decide which record labels need patient address and division.

___ When retiring records, the system searches records for retirement based on Patient Category. Family members are lumped with retiree records. That can present a problem if just family members are being retired. Currently there is no way to differentiate between these two patient categories. The development team is currently looking at this problem.

As a workaround, file areas could maintain family member records separate from Retirees. And then a retirement list could be generated appropriately.

___ The O/P record location field on the mini-registration does not update when records are transferred or retired when the Transfer-Retire option is used. This is being addressed in a SIR being fixed now.

B.3 INTEGRATION ISSUES.

B.3.1 CLN.

CLN/PAS.

___ Contact the PAS POC to verify that PAS Profiles have been updated and schedules have been updated for consulting providers who need to enter consult results for a particular clinic if consult resulting on CHCS is utilized.

Contact the PAS POC to verify that PAS profiles and schedules have been updated to support the use of APV.

CLN/PAD.

___ Identify POC for transportable patient records.

B.3.2 COMMON FILES.

CF/WAM

___ Database administrators, MEPRS personal and WAM personnel will need to coordinate with each other to determine correct default locations for providers, correct MEPRS codes for the CHCS MEPRS file, and correct MEPRS codes for hospital locations.

CF/APV AREAS (CLN, PAD, PAS, MRT)

__ For the APV project, the building of APV MEPRS codes and APU Locations must be complete before other sub systems can do their file and table builds.

Refer to PAS, PAD, CLN, and MRT IUGs

B.3.3 LAB.

___ LAB/INTERFACES

Regarding APCOTS, refer to the MPL Enhancement (Lab IUG).

Regarding DBSS Blood Bank interfaced sites, there are screen changes as a result of this upgrade to the laboratory test ordering screens and results retrieval.

B.3.4 MCP.

A. USE CURRENT END ELIG DATE TO DETERMINE AD DISENROLLMENT

MCP/CONTRACTORS

___ Sites must coordinate with the Lead Agent/Tricare contractors to determine how long a grace period, if any, should be established for AD patients before disenrollment occurs.

B. SET PCM CAPACITY FOR MEDICARE ENROLLEES

MCP/PAS

___ Sites enrolling Medicare patients may now establish PCM capacities for each PCM.

C. LIST ONLY PCM GROUP MEMBERS IN HELP TEXT

MCP/PAS

___ If no provider shows in the "Referred by" field, a user can display a list of PCM providers.

D. DISPLAY DEERS INFO IN MTF BOOKING FOR MEMBERS NOT ENROLLED

MCP/DEERS/PAS

___ CHCS will interface with DEERS. DEERS Information stored in the Patient File for patients not enrolled on the local system will be updated every time a DEERS check for that patient is made.

___ Enrollee Lockout must be activated in the clinics to utilize enrollee lockout screen enhancements.

___ All users performing new registrations, full or mini-reg, may be able to view a patient's Tricare status.

E. AUTOMATIC ELIGIBILTY CHECK FOR CONDITIONAL ENROLLMENT

MCP/DEERS

___ Users may still process conditionally enrolled patients manually as before, although CHCS performs DEERS checks and updates enrollment status every 7 days if appropriate.

F. AD ASSIGNMENT TO EXTERNAL PCM

MCP/DEERS

___ DEERS will count AD personnel assigned to contractor PCMs as being assigned to the contractor and will display that DMIS ID.

MCP/CLN

___ Active Duty Personnel may now be assigned to Providers with Agreement types of NET and SUP.

G. PROVIDER PLACE OF CARE INACTIVATION

MCP/PAS

___ PAS Clinics/MCP Places of Care and providers can be inactivated in a similar manner now.

___ PAS inactivation of Clinics and Providers will affect MCP Places of Care and MCP Providers. MCP Supervisors should be members of PAS Supervisors Mail Groups or have their mail also attached to the PAS bulletins SD INACTIVATE PROVIDER and SD INACTIVATE PLACE OF CARE.

___ MCP inactivation of providers via the PAS PROVIDER PROFILE screen in GNET will affect PAS Providers.

___ MCP Inactivation at the Group and Place of Care Level within the menu option GNET ARE NOT PAS inactivations.

___ Inactivation of providers via any other CHCS functionality will affect PAS and MCP. CHCS will display a message informing the user if the provider has open appointments, wait list requests or linked enrollments.

H. UIC TOTAL SOLUTION

MCP/ALL

___ All functionalities will be affected.

___ MCP UIC/PCM links must be reviewed and corrected where necessary.

I. EBC

Refer to EBC IUG.

B.3.5 PAD/MSA.

___ Confirm that all Common File data related to PAD/MSA is entered.

___ Workflow associated with the new APV software is strongly integrated amongst several functional areas. PAD Supervisors would be advised to initiate communication with their counterparts in the Patient Appointment Scheduling workcenters to assure efficient utilization of this software.

___ Workflow associated with the new DD7A software is strongly integrated amongst the PAD and PAS functional areas. PAD Supervisors would be advised to initiate communication with their counterparts in the Patient Appointment Scheduling workcenters to assure efficient utilization of this software.

B.3.6 PAS.

___ APV clinic build must be coordinated with CLN and MRT functionalities.

B.3.7 PHR.

PHR/CLN

___ If the site decides to use dispensing software, pharmacy needs to communicate the impact on physician/nurse users. The Patient Order List (POL) displays RX dispensing information and mail messages are generated when RXs are marked non-compliant.

___ Drug lookup of a compounded drug via CLN option DRUG will display the title 'Compounded Drug' and a listing of all the drug products it contains and their respective American Hospital Formulary Service (AHFS) Classifications. Drug lookup by means of '.[therapeutic class]' will include any compounded drugs containing members of the specified class. Compounded drugs will not generate a Patient Medication Instruction Sheet(PMIS).

PHR/CLN/PAD/PAS

___ Discuss procedures for entry of APU orders between Pharmacy, Clinical and PAS/PAD supervisors to ensure the timely

ordering and processing of medication and IV orders on APV patients.

PHR/INTERFACES

___ The fill cost is transmitted to CEIS and MCHMIS.

PHR/CF

___ The Provider Screen Changes should be reviewed in the 4.6 Common Files IUG.

B.3.8 RAD.

___ The development of the Ambulatory Procedure Unit will now allow CLN/LAB/RAD/PHR to place and process orders on a new page - Ambulatory Procedure Visit (APU) on the Patient Order List (POL) screen. The APV page is created at the time the Ambulatory Procedure Request is made via Order Entry or by a PAS user when an appointment is 'booked.' When the order is activated, CHCS will communicate a request to schedule an APV appointment through the PAS software. However, the APU page will not be activated until PAS completes the appointment process - KEPT appointment. If pre-op orders are entered on this page but the appointment has not been KEPT, Radiology will NOT be able to see or process these orders, which may result in duplicate order entry once the APU page has been activated.

It is recommended that pre-op x-rays continue to be placed on the 'Outpatient Page'.

B.3.9 MRT.

___ Appropriate file rooms should be created to STORE the NEW Standard Record Types (APV, etc.). Will PAD or PAS create these file rooms?

___ All PAS/MCP personnel responsible for creating APV records must have access to APV file rooms storing those records. This means assigning them file room security keys (if any are assigned to APV file rooms).

___ It must be decided which file/table POC (PAS or MRT) will enter APV file rooms into the system.

B.4 FILE AND TABLE CHANGES.

B.4.1 CLN.

File and table time for data collection and build may be extensive, depending on what enhancements a site chooses to activate and what files were built previous to 4.6. It is recommended that each section of this IUG be thoroughly reviewed before deciding to utilize it's enhancements.

Coordination with other subsystems will be necessary for some of the enhancements. Once a decision has been made, review the File and Table section before activating.

Note: Some F/T build may be done pre or post-load.

___ To support the use of Nursing Due lists, make entry in a new field in the Clinical Site Parameters called 'Days to Collapse the Past APV Page:'. This parameter should be set before the site begins using the APV page options.
Est. Time: 1 minute

___ Work with builder of Common Files to name the APV page by using the first three characters from the abbreviation field in the Hospital Location File (#44) and adding '-APV'. The abbreviations entered for these locations should not begin with the same three characters (i.e. 'SDS...' or 'APU...'). (Refer to Common Files Sections on F/T)

___ If the site plans to use Nursing Documentation options, file and table for the Nursing Order file should be reviewed. (1-4 hrs.)

___ Consults must be defined for a specific clinic to result and designated as SCHEDULED if not currently with that Schedule type (do this post-load so as not to upset current Consult processing). Consults in CHCS are maintained as ancillary procedures.
Est. Time: 1-2 hrs.

___ The Progress Note Title (PNM) option must be populated before the users will be able to document notes.
Time Est.: 1 min./note title

___ Assign the NS DISCHARGE security key for authorized users to access the 'Discharge Summary Enter/Edit' option. Any Nurse/Clerk users who transcribe D/C summaries and all doctors who discharge patients require this key.
Time Est.: 10min/20users

___ Populate the Patient Instructions file with discharge summary instructions. Populate the 'Discharge Summary Text' file with predefined summary templates for import into summaries.
Time Est.: 1 hr. - 1 week (depending on number)

___ Assign NS IMM security key to authorized users who must access the 'Immunization/Skin Test Enter/Edit' option for the purpose of documenting.
Time Est.: 10 min/20 users

___ Review the immunization file in the 'Immunization Maintenance' option (IPM) before the use of this option.
Time Est.: 4 hrs.

___ Assign the DG TRANSPORTABLE RECORDS security key to the appropriate Clinical personnel for this effort.

___ Coordinate with the Systems personnel to define TCPR parameters regarding the IP addresses of sites you wish to communicating with.

___ Ensure that the Clinical Site parameters to enable TCPR Mini-Reg and Purge TCPR records are set. Defaults are Yes and 7 days.

___ Ensure that the Clinical Site parameter for purging Problem Selection Lists is set. Default is 365 days.

B.4.2 COMMON FILES.

Pre Load:

___ Determine which Divisions have inappropriate MTF entries. These will need to be fixed.

___ Determine which hospital locations have inappropriate MTF entries. These will need to be fixed.

Post Load:

___ After all sites on a given CHCS system agree on one name to designate for the System, and values for the other fields in the file, then they can enter a Host Platform.

___ In the case of hospital locations with inappropriate MEPRS codes, A determination will need to be made as to who uses the location if anyone. If no one uses the location, it should be inactivated. If the location is being used or

orders are being made using it as a requesting location then a determination should be made as to what MEPRS code it should be using and whether the "Location Type" is correct.

___ Hospital Locations with the MEPRS code or Cost pool Code inconsistent with the Group ID of the hospital location will need to be fixed.

___ Medical treatment Facility file entries can be edited as necessary.

___ APU MEPRS codes will need to be edited.

___ APU Hospital Locations will need to be linked to DGA* MEPRS.

___ Mail bulletins need to be attached to appropriate mail groups for inactivated providers or places of care to insure that system generated messages get to the appropriate people.

B.4.3 LAB.

Concerning Anatomic Pathology and APCOTS, this upgrade will not affect sites that have already completed File/Table for MPL. There are no software changes from CHCS versions 4.52 to 4.6.

___ For all DOD-selected and funded sites using APCOTS that have not performed File/Table for MPL, complete file and table build.
Time Est: 1-2 hours.

B.4.4 MCP.

A. USE CURRENT END ELIG DATE TO DETERMINE AD DISENROLLMENT

___ Set Grace Period Parameter field if needed. Default is 120 days if no action is taken.

Menu Path: CA>PAS>MCP>FMCP>FTAB>PARA

B. SET PCM CAPACITY FOR MEDICARE ENROLLEES

___ Reset PCM Capacities if necessary. 5 mins per PCM Group

C. LIST ONLY PCM GROUP MEMBERS IN HELP TEXT

None

D. DISPLAY DEERS INFO IN MTF BOOKING FOR MEMBERS NOT ENROLLED

None

E. AUTOMATIC ELIGIBILTY CHECK FOR CONDITIONAL ENROLLMENT

None

F. AD ASSIGNMENT TO EXTERNAL PCM

___ Define AD capacities for External PCMs with agreement types of NET and SUP via menu option GNET unless unlimited capacities are desired. 15 mins. per Provider Group.

G. PROVIDER PLACE OF CARE INACTIVATION

___ Ensure PAS TaskMan Bulletin, SD WEEKLY CLEANUP, is tasked to run weekly.

___ Attach PAS/MCP Supervisory Mail Groups to the new Mail Bulletins SD INACTIVATE PROVIDER and SD INACTIVATE PLACE OF CARE.

H. UIC TOTAL SOLUTION

None

I. EBC

Refer to EBC IUG.

B.4.5 PAD/MSA.

Post-load PAD/MSA File and Table changes:
Estimated time: 10-20 minutes

___ Verify that all necessary MASCAL File and Table information has been relocated in the new MASCAL Parameters (MAS). Menu Path: PAD>SDM>MAS

___ The DD7A Outpatient Billing Table should be populated with the correct rates for each B and C level MEPRS code. Menu Path: MSA>D7A>DTE

___ The APV Record Parameters should be populated by authorized Clinical Records Department supervisors.

B.4.6 PAS.

___ The Host Platform name must be entered into the Hospital Location file.

___ The clinic profiles need to be reviewed to ensure that they are set up with the correct service so that booking can search across divisions.

___ The site must populate the Service Type file through PAS post install.

___ APV clinics must be set up in the PAS profiles.

___ Record tracking file rooms must be created for APV records. Any file room security keys need to be assigned APV PAS users.

___ A PAS bulletin SD WEEKLY CLEANUP should be tasked to run weekly. Attach bulletins SD INACTIVATE PROVIDER and SD INACTIVATE PLACE OF CARE to the appropriate PAS and MCP mailgroups.

B.4.7 PHR.

Pre-Load:

___ All items issued as stock should be defined as either 'BULK' or 'CLINIC'. This can be done post-load if the user prefers, however, it must then be done via MSI.

Post-Load: (Can be done at users' discretion, will not affect pre 4.6 functionality)

___ If the site intends to use Bar Code, the 'BAR CODE ENABLED' field, in the Outpatient Site Parameters, must be set to 'YES'.

___ The printer(s) that will print bar coded labels must be defined in the Device File.

___ If the site intends to use Dispensing Option/Dispensing Option Enhancement or Quick Dispense, Dispensing Options must be ENABLED for the appropriate Division(s).

___ Compounded drugs in use should be defined via ADN to include all applicable NDC numbers(to a maximum of 8 NDCs or 8 ingredients). If this is done the Clinical Screening software will act against each ingredient. If it is not the

software will process a compounded drug as if it were a single product.

___ The site should be made aware of the new format of the Refill Grace Period and Scheduled Refill Grace Period fields. The defaults of 75% may be accepted or changed.

___ Non-professional users, e.g., volunteers may be assigned Quick Dispense (QRX) as a secondary menu option.

___ Enter APU clinics in Ward Groups.

___ The local cost field in the Formulary must be populated for accurate cost reporting.

B.4.8 RAD.

___ All Radiology Location schedule templates utilizing 24-hour scheduling will require start and stop time template modification.

___ Enter any record types to be pulled for clinics into the Borrowers Setup File.

___ Add new print fields to Label Print formats if they will be used.

B.4.9 MRT.

1. INPUT STANDARD RECORD TYPES IN TYPE OF RECORD SETUP FILE

___ Populate the STANDARD RECORD TYPE FIELD in the TYPE OF RECORD SETUP FILE for all record types currently utilized, as well as any NEW Standard Record Type to be implemented.

2. CREATE AN 'ASCII NOTIFICATION' MAILGROUP:

___ The System Mail Manager does this. (Menu path: EVE->MM->MGE)

The mailgroup members will be receive a bulletin notifying them that the Record Index/Shipment Data File is ready to be converted to ASCII format and placed on a diskette for shipment to NPRC.

3. ADD 'ASCII' MAILGROUP NAME TO MRT APPLICATION SETUP: (Menu Path: PAD-> MRM->{file room}->SD-> APP->second

screen)

___ After creating RT ASCII NOTIFY mailgroup, enter name of the mailgroup the new ASCII File Mail Group FIELD in the Record Tracking Application Setup.

4. ALLOW BATCH PROCESSING (Menu Path: PAD->MRM->{file room}-> SD->MTS->Movement Type Set-up)

___ The 'Allow Batch Processing' specifies whether a Movement can be utilized when records are retired or transferred.

The 'Allow Batch Processing' field for the NEW Movement Type of RETIRE RECORDS MUST be set to YES by the File room Supervisor

5. CREATE FILEROOMS FOR STANDARD RECORDS TYPES THAT WILL BE USED IN RECORD TRACKING

___ Enter Menu Path: MRM->{file room}>SD->FSU) and create any new file rooms which will be storing new records.

___ Enter new any new record types in the Type of Record Setup (Menu Path: PAD->MRM->{file room}->SD->TYS).

Make sure File room has been added as 'File room Allowed to Store Record.

___ Add Standard Record Type to the Application Setup File (Menu Path: PAD->MRM->{file room}->SD->APP->select DIVISION ->RECORD TYPES screen)

___ Add file room to Borrowers Setup File (Menu Path: PAD->MRM-> file room}->SD->BSU)

___ The Database Administrator must complete the Service and MEPRS code fields in the Hospital Location File for all APV File rooms created (Menu Path: CA->DAA->CFT->CFM->HOS)

B.5 SECURITY KEYS.

B.5.1 CLN.

NS CONSULT RESULTS	Allows the user to enter Consult Results and view results after verification.

NS IMM	Allows the user access to document immunizations from the Nursing Menu.
NS DISCHARGE	Allows the Clinical user access to the Discharge Notes option.
GP EUROP1	Allows the user access to problem lists and progress notes from the Order Entry action prompt.
OR MD MNG	Allows the user to access the Table Maintenance Menu option from the Physician menu.
SD APV	Allows the user access to the MAPV option.
SD APV MINSRV	Allows the clinical user to emergently disposition an APV patient from the ORE action prompt to support an inpatient episode that results from an APV visit.

B.5.2 COMMON FILES.

No new Security Keys for CF.

B.5.3 LAB.

No new Security Keys for LAB.

B.5.4 MCP.

CPZ PCM AGR LOCK

This Key is intended for users allowed to assign AD personnel to External PCMs.

Menus Affected:
ER Enrollments
BMCP Batch PCM Reassignment
UBER Batch Enroll AD
UICP UIC/PCM Maintenance
GNET Provider Network

Suggested users: Enrollment Clerks, MCP File/Table personnel, Personnel performing Batch Enrollments, PCM reassignments.

CPZ MCSC

This key is intended only for use with the MCSC interface in selected regions. This is here for documentation only.

DO NOT ISSUE UNLESS TOLD TO DO SO

CPZ DISENROLL-CANCEL CORRECT (EBC related)

This key locks the menu option DCAN (Cancel Disenrollment).

Menus Affected:
CAN Disenrollment Cancellation/ Correction

CPZ TSC LOADER

DO NOT ASSIGN

This key was initially for use with MCSC I and the HL7 MCP transfer. This key should not be assigned to anyone.

B.5.5 PAD/MSA.

MSA DD7A BILLING	Locks access to the DD7A Monthly Outpatient Billing Process (MBP). This key should be given to any/all MSA personnel responsible for processing and finalizing the new DD7A Billing Report
DG APVOUT	Security key restricts access to the report menu of the APV Delinquent Record Tracking Menu. This key should be given to All Clinical Records personnel responsible for APV record completion.
DG APVSUPER	This security key restricts access to the APV Parameters option of the APV Delinquent Record Tracking Menu. This key should be given to the Clinical Records Supervisor
DG APVUSER	This security key restricts access to the APV Delinquent Record Tracking Options. This key should be given to All Clinical Records personnel responsible for APV record completion.

MSA DD7A BILLING	This key will allow a user access to produce an end of month bill for the new DD7A function. This key should be given to MSA personnel responsible for processing this End of the Month DD7A Report.

B.5.6 PAS.

SD APV: Accesses the APV menu.

SD APV KEPTROSTER: Accesses roster of Kept APV appointments.

SD APV MINSRV: Accesses the APV minutes entry/edit screen.

Attach any APV file room security keys to PAS APV users.

B.5.7 PHR.

There are no new Pharmacy security keys for Ver 4.6

B.5.8 RAD.

No New Security Keys for RAD

B.5.9 MRT.

SD APV	Accesses the APV menu Assigned to PAS or PAD users who create APV records.

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APPENDIX C:

TRAINING AND FILE/TABLE BUILD MATRIXES

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TRAINING MATRIX (Version 4.6)

	Demos	Hours	Users	Training	Hours	Users	Handouts*
CLN	Y[1]	4	Nurses/Clks Physicians CLN Spvrs	N	-	-	-
COMMON FILES	Y	2	DBA	N	-	-	-
DTS	N	-	-	N	-	-	-
LAB	Y	1.5	QA/LAB Tnrs F/T POCs	N[2]	-	-	-
MCP	Y	2[3]	MCP/Tricare Enrlmt Clks HCF	N	-	-	-
MRT	N	-	-	Y	2.5[4]	MRT POCs	-
MSA/TPC	Y	1	MSA POCs	N	-	-	-
PAD	Y	2.5[5]	PAD POCs	N	-	-	-
PAS	Y	2	PAS POCs	N	-	-	-
PHR	Y	.5-1.5[6]	PHR POCs	N	-	-	-
RAD	Y	2	RAD POCs	N	-	-	-
WAM	N	-	-	N	-	-	-

*Handouts may be used to supplement demos/training or, in some cases, be used in lieu of training. Appendix E includes the familiarization training plan.

1 -Recommending separate sessions for Nurses/Clerks, Physicians, and CLN Supervisors.

2 -If APCOTS is to be activated, additional 2-3 hours Training for key LAB POCs and F/T Build personnel.

3 -MCP/Tricare Supervisors 2 hours, Enrollment Clerks 1 hour (can also attend portion of above session), Health Care Finders .5 hour.

4 -2 hours, personnel that retire records; F/T Supervisors, 2 hours (can also attend the same session as personnel that retire records); Site Manager or System Specialist .5 hour; PAS Supervisor (if they will enter APV file rooms in system, .5 hour.

5 -First 1.5 hours are for Clerks, an additional hour for Supervisors.

6 -If Bar Code and Dispense Options ARE used, demo will be 1.5 hours. If they are not being used, a .5 hour demo for PHR supervisors only.

FILE AND TABLE BUILD MATRIX (Version 4.6)

	PRE LOAD	TIME	POST LOAD (PRE-USER)	TIME	POST LOAD (POST-USER)	TIME
CLN	DC	8hrs-1 week	N/A	-	FT	4-8 hrs.
CF	DC/FT	8 hrs.	N/A	1 hr.	FT	-
DTS	N/A	-	N/A	-	N/A	-
LAB	N/A	-	N/A	-	FT[1]	1-2 hrs.
MCP	N/A	-	N/A	-	FT	1 hr.
MRT	N/A	-	N/A	-	N/A	1 hr.
PAD/MSA	N/A	-	FT	10-20 Min.	N/A	-
PAS	N/A	-	N/A	.5[2]	FT	1 hr.
PHR	N/A	-	N/A	-	FT	.5 hr.+[3]
RAD	N/A	-	N/A	-	N/A	1 hr.
WAM	N/A	-	N/A	-	N/A	-

Note: The File and Table build estimates may vary. This is an estimated time line for planning purposes. Use the appropriate sections of the IUGs for detailed information.

DC = Data Collection FT = File/Table

1 -LAB file and table is only necessary if APCOTS is being used at site and MPL file and table build is not complete.

2 -For PAS, this time can be used for MRT instead (depending on who builds the file rooms.

3 -PHR file and table estimates will depend on which functions are being used (Dispensing option, Barcode, etc.)

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APPENDIX D:

DATA COLLECTION FORMS

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Data Collection Forms

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APPENDIX E:

FAMILIARIZATION TRAINING PLAN

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Familiarization Training Plan

NOTE: This provides steps that can be used to Demo this feature.

- **Lab Store Supervisory Review (SRM) options**

The Supervisory Review Menu Options enable laboratory supervisors to enter and print a report documenting that patient test results on the Specimen Master Log have been reviewed. The capability to review and print the supervisory review report is maintained on CHCS for two years.

A. ACCESS/VERIFY **LABTF/LABTFV** LWE: **MAIN LAB**

Menu Path: **LAB->LLM->SRM**

The Supervisory Review Enter/Edit (SRE) option provides lab users with the **LRSUPER** security key the capability to document on-line that certified laboratory test results have been reviewed through the Specimen Master Log report for all or selected Accession Areas of the user's work element. **This option also allows edit of previously entered review documentation.**

1. Using **SRE** option, for Spec Master Log Date: **T-1**

All ACCN Areas? -> **NO**
Select Area: **CH** ... Enter Comments? -> **NO**
Reviewer: **LAB,TF** ... D/T of Review: **T@0600**

Select Area: **HE** ; Enter Comments? -> **YES**

Comment: Results on [HE 23] were abnormal due to specimen collection problems.

Reviewer: **LAB,TF** (default), D/T of Review: **T@0700**

Select Area: <**RETURN**> ... SML Date: **^^**

The Supervisory Review Print (SRP) option allows printing a report that displays by Accession Area(s) the documentation of review of certified lab test results through the daily Specimen Master Log report. Data is stored on-line in a new CHCS file, SUPERVISORY REVIEW LOG, #8745. Anything older than 2 years will be purged via one of the LRUTZAP routines.

2. Using **SRP** option, using **T-1** for Earliest/Latest Date of Review (note: this is the date of the SML, not when the review was done); All Accession Areas: **Yes**

B. Then '**RESTART**' & log on as **LAB,SF**

ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

1. Using **SRE** option, for Spec Master Log Date: **T-1**

All ACCN Areas? -> **NO**
Select Area: **CH** ... {Note the response:}

Accession Area [CHEMISTRY] was documented as reviewed on [21 Jun2001@0600] by [LAB,SF].

Do you wish to edit this documentation? NO// **YES**

Do you wish to enter/edit comments? NO// **YES**

Comment: Results on [CH 101] were GROSSLY elevated due to specimen collection error. Sample was obtained from same arm with IV of D5W.

Reviewer: **LAB,SF** ... D/T of Review: **T@0600**
Select Area: <**RETURN**> ... SML Date: **^^**

2. Using **SRP** option, using **T-1** for Earliest/Latest Date of Review (note: this is the date of the SML, not when the review was done); All Accession Areas: **Yes**

- **Abnormal or Critical Results by Test (ACT)**

This menu option is similar to the ACR (Abnormal, Critical and Delta Result Report) menu option. It now enables a user to specify the Lab Test(s) of interest and then choose the Alert level: Abnormal or Critical. The display/ print appearance of this new report is compressed automatically to screen or needs to be printed on a device capable of 132 column format. The output devotes one line per specimen.

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

Menu Path: **LAB->LRM->RES->ACT**

For earliest/latest certify date: **T-1**

Test: **GLUCOSE**

Select (**A**)bnormal initially, then repeat steps & use (**C**)ritical the second time.

At Device: <**CR**> {screen automatically converts to 132col}

- **Results Turnaround Time Report (TAT)**

The Results Turnaround Time (TAT) report is a new option to monitor the elapsed time from sample Lab Arrival Time to the time the test result is certified. This tool allows Laboratory Supervisors to monitor and document laboratory response time for Quality Assurance purposes.

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

Menu Path: **LAB->LRM->RES->TAT**

The initial prompt: Sort by (**A**)ccn Area or (**S**)pecific Accn gives you several different pathways to follow. For a place to start or demo ...

(A)ccn Area: SEROLOGY, or COAGULATION compile quickly for T-1

If by Selected Test, can use RPR for SERO, PT for COAG

(S)pecific Accn: can use CH 444

At Device: <**CR**> {screen automatically converts to 132col}

- **Quality Control Report Menu Option Enhancement**

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

Instead of launching directly into the QCR report, this plan guides you through the process from the beginning. First, you will define a control and its parameters, then use QCE to enter values, and following this, you may check out the new QCR menu option.

1. Defining the control

Menu Path: **LAB->LLM->QCM->CAE**

Create a new control (& patient), such as QC_CHEM,ABN LOW

Review the Edit Screen and see the new field, Decimal Places (introduced in version 4.51) for the Lab Test.

The following fields, if completed as illustrated, will enable you to demonstrate all old and new QC functionality (result entry and reports). If Lab Section is left blank, the new 4.6 functionality cannot be demo'd.

Name: **QC_CHEM,ABN LOW**	Identifier:
Specimen (Simulated): **SERUM**	
HCP (Simulated): **LAB,DR**	
Location (Simulated): **MAIN LAB**	
Manufacturer:	Source:
Lab Section: **CHEMISTRY**	MEPRS Code: **DBAA**
Expiration Date:	Stop Data Entry:
Comment:	
Tests on Control:	
AMYLASE	
Decimal Places: **1**	
Mean: **50**	One Std Dev: **2.5**
Min:	Max:

Notes:

- Name and Specimen (Simulated) are required fields to initially define the QC.
- If HCP (Simulated) is left blank, Hcp: (UNKNOWN) will display during result entry.
- If Location (Simulated) is left blank, a SYSTEM ERROR will result as you attempt to certify.
- If Lab Section is left blank, the new 4.6 Quality Control Reporting functionality cannot be demonstrated.

- If MEPRS Code is left blank, the new 4.6 functionality will prompt the user for this information during QCE result entry at the Certify/File Results prompt.

2. Testing the control

   Menu Path: **LAB->LRM->REM->QCE**

   Enter 3 rounds of results. Use T-2@0800, T-1@0800 & T@0800 for the Collection Date/Time prompts with your choice of results (hopefully 45-55) for your QC.

3. Testing the new 4.6 QCR functionality

   Menu Path: **LAB->LLM->QCM->QCR**

   Refer to Section 3.4.2 when checking out the options.

- **Inactivate/Activate SNOMED AutoEncoding option**

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

   Menu Path: **LAB->LSM->ELA->LSA->LWE**

   The field to toggle SNOMED Autoencoding is on the second screen. As this is a Lab F/T menu option, required security keys: LRLAB, LRSUPER & LRPOWER for natural pathways in Lab.

- **Lab Host Platform Parameters Lab F/T edit option**

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

   Menu Path: **LAB->LSM->ELA->LSA->LHP**

   With this edit screen, you will be able to add/delete entries for:

   Sensitive Results POC(s) - These CHCS user POCs will receive MailMan bulletins when the LRSENSITIVE or LRSENSLAB security keys are assigned to users on the system.

CHCS Blood Type Test Name - Entry must be a valid CH subscript test in the Lab Test (#60) for reporting a patient's blood group and type. The software will validate (1) the test exists in file #60, and (2) that the test is built correctly to match the Result Codes used for the DBSS ABO/RH test. If the test exists and the test parameters are correct, the test name will be accepted. If either fails the examination, the system will not accept the test name entered and will display a message detailing how the test should be built.

Blood Type Bulletin Recipient(s) - These CHCS User(s), Mail Group(s) and/or Device(s) will receive MailMan bulletins when there is a discrepancy in the EXISTING Patient Blood Type stored in the PATIENT file and a new Blood Type that is being sent to the PATIENT file from either DBSS or CHCS.

- **New APV Page in POL Enter/Maintain Order Screen**

The following examples illustrate the new APV page users may encounter when entering the Enter/Maintain Order POL screen. Note that if the APV appointment is kept, the APV page is active and lab orders may be placed on that page. If the APV page is not active, users cannot either log-in LAB orders that have been entered on that page or enter new orders.

A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

Menu Path: **LAB->LSP->EMO**
Select Patient: **DAVIS,ALLAN** {Just plain ALLAN}
Select Requesting Location: **APU GENERAL SURGERY**

```
DAVIS,ALLAN          Age:26    20/500-50-6509          GEN-APV POL
     1 APR   APPT.FOR: APU GENERAL SURGERY  on 21 Jun
             2001@0800 {PAS entered APR order}
              ~Scheduled for 21JUN@0800  . . . . . .TRAINM 20JUN@1701




 *GEN-APV*  OUTPAT
```

Note that the APV page is 'active'. New orders may be entered on this page.

Select Patient: **DODD,ALLAN A**

Select Requesting Location: **BEAA**

```
DODD,ALLAN A          Age:26    20/500-50-6515              OUTPAT POL
     This patient has no Active orders on this page.




+*OUTPAT*     9B

      APV Page(s) are located to the left of the Outpatient Page.
```

Note that the Outpatient page is 'active'. Although you can <= to view the APV Page(s), New Lab orders can only be entered on the Outpatient page.

- **New Mini-Reg Screen for Tricare Enrollment Info**

  Users accessing Mini-Registration will now see Tricare Enrollment information (or lack of it) when exiting this option unless F10 is used to exit. The screen appears between the prompts for "Donor?" and "Allergy info".

  A. ACCESS/VERIFY **LABSF/LABSFV** LWE: **MAIN LAB**

  Menu Path: **LAB->LPR->MRG**
  Select Patient: **PICARD,AUGUST E**

```
Patient: PICARD,AUGUST E                Enrollment/Empanelment Information
FMP/SSN: 20/379-43-6100     DOB: 31May66    PATCAT: A11    Sex: M
              Personal Data - Privacy Act of 1974 (PL 93-579)

                    ACV: A-TRICARE PRIME (ACTIVE DUTY)
                 DMIS ID: 0037-WALTER REED ARMY MEDICAL CENTER
                PCM Name: ENRIQUEZ,FRANK M
               PCM Phone: 202 271-5851
            PCM Location:
                Medicare:
             Region Code: 02
             Direct Care: ELIGIBLE
                CHAMPUS: NOT ELIGIBLE
Dir Care Elig Start Date: 12 Mar 2001
 Dir Care Elig Stop Date: 10 Feb 2003
   Last DEERS Elig Check: 17 Jun 2001
```

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has been left blank
intentionally.

****

APPENDIX F:

SAMPLE REPORTS

****

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intentionally.

Sample Reports

There are no sample reports.

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intentionally.

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APPENDIX G:

LAB TEST FILE AD HOC UPDATE

****

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LAB TEST FILE AD HOC UPDATE
GS_LAB TEST File (CHCS version 4.6) FileMan battery

Template Name	Action Groups: (1)	(2)	(3)	(4)
GS_LT_A_PRINT NAME	[ ]	[ ]	[ ]	[*]
GS_LT_B_PRINT ORDER	[ ]	[ ]	[ ]	[*]
GS_LT_C_TYPE SINGLE	[*]	[ ]	[ ]	[ ]
GS_LT_D_TYPE PANEL	[*]	[ ]	[ ]	[ ]
GS_LT_E_SUBSCRIPT	[ ]	[ ]	[*]	[ ]
GS_LT_F_STAT ALLOWED	[ ]	[ ]	[ ]	[*]
GS_LT_G_UNIQUE ACCN (YES)	[ ]	[ ]	[ ]	[*]
GS_LT_H_NO WORK ELEMENT	[ ]	[ ]	[ ]	[*]
GS_LT_I_RSLT TYPE NUMERIC	[ ]	[ ]	[*]	[ ]
GS_LT_J_RSLT TYPE S-O-CODES	[ ]	[ ]	[*]	[ ]
GS_LT_K_RSLT OPTIONAL VS TYPE	[ ]	[*]	[ ]	[ ]
GS_LT_L_RSLT OPTIONAL (YES)	[ ]	[ ]	[ ]	[*]
GS_LT_M_SECONDARY TEST	[ ]	[ ]	[*]	[ ]
GS_LT_N_REF RANGE 132COL	[ ]	[ ]	[*]	[ ]
GS_LT_O_DEFLT VALU & CODES	[ ]	[*]	[ ]	[ ]
GS_LT_P_DELTA CHECK	[ ]	[*]	[ ]	[ ]
GS_LT_Q_DEFLT VALU & NUMERICS	[ ]	[ ]	[*]	[ ]
GS_LT_R_LAB TEST IN PANEL	[ ]	[ ]	[*]	[ ]
GS_LT_S_MICRO SCREEN	[ ]	[ ]	[*]	[ ]
GS_LT_T_LAB COLLECT SAMPLE	[ ]	[ ]	[ ]	[*]
GS_LT_U_COLLECTION SAMPLE	[ ]	[ ]	[*]	[ ]
GS_LT_V_APPROVAL REQUIRED LIST	[ ]	[ ]	[ ]	[*]
GS_LT_W_ACCESSION AREA	[ ]	[ ]	[*]	[ ]
GS_LT_X_CPT CODE_SINGLE	[ ]	[ ]	[ ]	[*]
GS_LT_Y_CPT CODE_PANEL	[ ]	[ ]	[ ]	[*]
GS_LT_Z_NO LAB METHOD	[ ]	[ ]	[ ]	[*]

Prelims: All designated Inactive Tests are set as TYPE = NEITHER

NOTE: If any ad hoc results say [No output] (no printout), then the reason may be:

a. No discrepancies were found (which is desired).

b. There was a problem (i.e., typo) when entering either the sort or print template lines.

To make sure this is NOT the case, temporarily change one of the tests in the LAB Test file that should be "caught" by the ad hoc and then re-run the ad hoc. (Be sure to restore the LAB Test back to its former settings!)

__ **GS_LT_A_PRINT NAME:** Each test must have a print name and it is recommended that the print names be unique. Tests without a print name will appear first on the list. If two tests share the same print name, successive occurrences of the print name will be suppressed from printing.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
                  Then by: PRINT NAME
                  Start with: @
                  Go to: LAST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
            PRINT NAME;N
            NAME
```

SAMPLE OUTPUT: In the example shown below, Iron Saturation does not have a print name. Alpha-Fetoprotein and Alpha-Fetoprotein Screen share the same print name.

NUMBER	PRINT NAME	NAME
1861		IRON SATURATION
351	AB SCRN	ANTIBODY SCREEN
115	AFP	ALPHA-FETOPROTEIN
1772		ALPHA-FETOPROTEIN SCREEN
185	ALBUMIN	ALBUMIN
188	ALK PHOS	ALK PHOSPHATASE

__ **GS_LT_B_PRINT ORDER:** Each test should have a print order number assigned and each print order number should be unique. Duplicate print orders will be suppressed from printing. Those tests without a print order number will appear at the bottom of the list.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
                  Then by: PRINT ORDER
                  Start with: @
                  Go to: LAST//
                     Then by: NAME
                     Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
            PRINT ORDER;N
            NAME
            TYPE
            SINGLE/PANEL;"SINGLE /PANEL"
            |ACCESSION AREA       (multiple)
            ACCESSION AREA:ABBREVIATION;"ACC AREA";L4
```

SAMPLE OUTPUT: In the example shown below, Appearance and PT share the same print order number. AFB Panel and Bilirubin have not had print order numbers assigned.

NUMBER	PRINT ORDER	NAME	TYPE	SINGLE /PANEL	ACC AREA
1406	1.300	CELL COUNT	INPUT	PANEL	HE
1407	1.400	CSF PANEL	INPUT	PANEL	
489	2.000	APPEARANCE	OUTPUT	SINGLE	CH
1992		PT	BOTH	SINGLE	CO
1241	2.040	ELAPSED TIME	OUTPUT	SINGLE	CH
1896		AFB PANEL	INPUT	PANEL	TB
1901		BILIRUBIN	OUTPUT	SINGLE	CH

__ **GS_LT_C_TYPE SINGLE:** Single tests should not have a type of INPUT. Single tests should be assigned a type of BOTH or OUTPUT. If the test has been inactivated, NEITHER is appropriate.

SORT TEMPLATE:

```
Sort by:     '@(SINGLE/PANEL["S")&(TYPE["INPUT")
                   Then by: NAME
                   Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
      NAME
      SINGLE/PANEL
      TYPE
```

SAMPLE OUTPUT: In the example shown below, Ammonia has been incorrectly assigned a TYPE = INPUT. This should be correct to BOTH or OUTPUT.

NUMBER	NAME	SINGLE/PANEL	TYPE
206	AMMONIA	SINGLE	INPUT

__ **GS_LT_D_TYPE PANEL:** Panel tests should not have a TYPE of BOTH or OUTPUT. If the test has been inactivated, NEITHER is appropriate.

SORT TEMPLATE:

```
Sort by: 'SINGLE/PANEL;1
            Select: PANEL
                  Then by: '@(TYPE["BOTH")!(TYPE["OUTPUT")
                        Then by: NAME
                        Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
            NAME
            SINGLE/PANEL
            TYPE
```

SAMPLE OUTPUT: In the example shown below, Electrolytes has been incorrectly assigned a TYPE = BOTH. The type should be correct to INPUT.

```
NUMBER  NAME                              SINGLE/PANEL  TYPE
-------------------------------------------------------------
372     ELECTROLYTES                      PANEL         BOTH
```

__ **GS_LT_E_SUBSCRIPT:** The SUBSCRIPT of the test must match the LR SUBSCRIPT of the Accession Area the test is assigned to. If the two do not agree, change the test to an accession area with the correct subscript, change the subscript of the test, or create a new accession with the correct subscript.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
                  Then by: NAME
                  Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;C9;L15
            |ACCESSION AREA
            ACCESSION AREA:       (multiple)
              ABBREVIATION;C26;L4;"ACC AREA"
              LR SUBSCRIPT;C32;L20;"ACC AREA SUBSCRIPT"
              SETPARAM(LR SUBSCRIPT,"SCPT");X
            SUBSCRIPT;C54;L20;"TEST SUBSCRIPT"
            $S(SUBSCRIPT'=PARAM("SCPT"):" <*>",1:"");R4;X
```

SAMPLE OUTPUT: In the example shown below, C Difficile has a test subscript that does not match the accession area subscript.

NUMBER	NAME	ACC AREA	ACC AREA SUBSCRIPT	TEST SUBSCRIPT	
1106	ABO/RH TYPING	BB	CLINICAL CHEMISTRY	CLINICAL CHEMISTRY	
1149	ACANTHOCYTES	HE	CLINICAL CHEMISTRY	CLINICAL CHEMISTRY	
1811	ACETEST	CH	CLINICAL CHEMISTRY	CLINICAL CHEMISTRY	
196	AMYLASE	CH	CLINICAL CHEMISTRY	CLINICAL CHEMISTRY	
555	ANAEROBIC CULTU	MI	BACTERIOLOGY	BACTERIOLOGY	
1133	C DIFFICILE	MI	BACTERIOLOGY	PARASITOLOGY	<*>

__ **GS_LT_F_STAT ALLOWED:** Print a list of all tests defined as Highest Priority = STAT for review. If a test is designated as Highest Priority = STAT, the HCP may order the test to be performed stat.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@HIGHEST PRIORITY;1
              Select: STAT
                  Then by: |ACCESSION AREA
                  Subfield: ACCESSION AREA;S
                  Start with: FIRST//
                        Then by: NAME
                        Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
      NAME
      HIGHEST PRIORITY;L8
```

SAMPLE OUTPUT:

```
                                                 HIGHEST
NUMBER    NAME                                  PRIORITY
--------------------------------------------------------
     ACCESSION AREA: CHEMISTRY
193       ACETONE                               STAT
175       GLUCOSE                               STAT

     ACCESSION AREA: HEMATOLOGY
1177      CBC                                   STAT
```

__ **GS_LT_G_UNIQUE ACCN (YES):** Print a list of all tests defined as UNIQUE ACCESSION = YES and review. If a test is designated as UNIQUE ACCESSION = YES, it will always be assigned it's own accession number. This report will need to be run for each Lab Work Element (LWE), since the field can be defined differently for each LWE. The user will be prompted to enter the name (in part) as shown below. Users need to be aware of tests performed in more than one accession area within their LWE.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: LAB WORK ELEMENT
              sub-fld: '@UNIQUE ACCESSION;1
              Select: YES
                  Then by: |ACCESSION AREA
                  Sub-fld: .01:(#.16)_" - "_(#.01);S1;C15;L
      65;"Work Element"
                  Start with: FIRST// MAIN LA
                  Go to: LAST// MAIN LA~
                    Then by: NAME
                    Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L8
            NAME;L25
            COUNT(LAB WORK ELEMENT);L5;"# LWE"

Heading: UNIQUE ACCESSION LIST
```

SAMPLE OUTPUT:

```
UNIQUE ACCESSION LIST
NUMBER    NAME                        # LWE
-------------------------------------------------
     WORK ELEMENT: MAIN LAB - CHEMISTRY
206       AMMONIA                     1
1819      FIBRINOGEN                  1

     WORK ELEMENT: MAIN LAB - MICROBIOLOGY
362       GRAM STAIN                  2
1405      THROAT CULTURE              2
1403      URINE CULTURE               2
```

__ **GS_LT_H_NO WORK ELEMENT:** During Lab File/Table add/edit, there is potential to omit defining the LAB WORK ELEMENT field on the 2nd page. This list displays the test, and internal entry number for any single test without also having a lab work element defined. User will be prompted to enter the LAB WORK ELEMENT as a range, as shown below.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
Then by: ACCESSION AREA   (multiple)
          Sub-fld: '@.01:(#.16)_" - "_AREA;"Work Element"
          Start with Work Element: MAIN LA
          Go to Work Element: MAIN LA~
Then by: 'SINGLE/PANEL;1        {SINGLE}
Then by: '@COUNT(LAB WORK ELEMENT)=0
```

PRINT TEMPLATE:

```
Flds: NUMBER;L9
            NAME;L30
```

SAMPLE OUTPUT:

```
NUMBER      NAME
-------------------------------------------------------------------
1515        SERUM PORCELAIN
```

__ **GS_LT_I_RSLT TYPE NUMERIC:** For those tests defined as RESULT TYPE = NUMERIC, the following fields should be reviewed: Result Low, Result High, Decimal Places, and Result Length. The result low and high should not be too restrictive and result length should be blank. The user will be prompted to enter (in part) the name of the desired Lab Work Element (as shown below).

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@SINGLE/PANEL;1
              Select: SINGLE
                  Then by: '@RESULT TYPE;1
                  Select: NUMERIC
                    Then by: |ACCESSION AREA
                    Sub-fld: .01:(#.16)_" - "_(#.01);S1;C15;L
      65;"Work Elemnt"
                    Start with: FIRST// MAIN LA
                    Go to: LAST// MAIN LA~
                        Then by: NAME
                        Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds:
NUMBER;C1;L6
NAME;C9;L14
MTF LAB METHOD     (multiple)
  MTF LAB METHOD:
       LAB METHOD;L10
       SITE/SPECIMEN    (multiple)
         RESULT LOW LIMIT (ABSOLUTE);L6;"RESULT LOW (ABS)"
         RESULT HIGH LIMIT (ABSOLUTE);L6;"RESULT HIGH (ABS)"
         DECIMAL PLACES;L2;"DE PL"
         RESULT LENGTH;R3;"RES LEN"
         SITE/SPECIMEN;L7;"SITE/ SPECIMEN"
         UNITS;L8
```

SAMPLE OUTPUT:

```
                                    RESULT  RESULT
                                    LOW     HIGH     DE  RES  SITE/
NUMBER  NAME            LAB METHOD  (ABS)   (ABS)    PL  LEN  SPECIMEN  UNITS
-------------------------------------------------------------------------------
             Lab: MAIN LAB - CHEMISTRY
1770    2HR POSTPRANDI  GTT GLUCOS  0          999          PLASMA
1311    3HR.GTT         GTT GLUCOS  1          999          PLASMA    mg/dl
1820    ACETAMINOPHEN   ACETAMINOP  0          999          SERUM     ug/ml
1876    ACID PHOSPHATA  ACID PHOS   0          99           SERUM     U/L
196     AMYLASE         AMYLASE     1          999          URINE     U/HR.
                                                            SERUM     IU/L
                                                            PERITON   IU/L
```

__ **GS_LT_J_RSLT TYPE S-O-CODES:** Those tests defined as RESULT TYPE = SET OF CODES must have at least one RESULT CODE. This sort/print shows those tests with no codes.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@SINGLE/PANEL;1
              Select: SINGLE
                  Then by: '@RESULT TYPE;1
                  Select: SET OF CODES
                    Then by: MTF LAB METHOD
                    MTF LAB METHOD:
                    '@COUNT(RESULT CODES)<1
                        Then by: NAME
                        Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L18
            TYPE;L6
            RESULT TYPE;L12
            MTF LAB METHOD         (multiple)
              MTF LAB METHOD:
                  LAB METHOD;L12
                  RESULT CODES     (multiple)
                    CODE;L4
```

SAMPLE OUTPUT: In the example show below, both tests are defined as SET OF CODES but have no result codes.

```
NUMBER  NAME               TYPE    RESULT TYPE   LAB METHOD    CODE
-------------------------------------------------------------------------
1916    COMMENT 2          OUTPUT  SET OF CODES  COMMENT 2
1917    COMMENT 3          OUTPUT  SET OF CODES  COMMENT 3
```

__ **GS_LT_K_RSLT OPTIONAL VS TYPE:** Tests with a TYPE = BOTH should not be defined as RESULT OPTIONAL = YES. User will be prompted for entry of the name of the Work Element as a range as shown below.

Note: for lab work elements sharing panel tests, if any of the component tests are defined as Result Optional (YES) these tests will need to be defined Result Optional (YES) for each and every lab work element, if:

(1) the lab does not perform the test component, or

(2) the lab wants the test to be Results Optional (YES).

SORT TEMPLATE:

```
Sort by:     LAB WORK ELEMENT
               Sub-fld: '@(TYPE["B")&(RESULT OPTIONAL["Y")
                    Then by: |ACCESSION AREA
                    Sub-fld: .01:(#.16)_" - "_(#.01);S1;C15;L
       65;"Work Element"
                    Start with Work Element: MAIN LA
                    Go to Work Element: MAIN LA~
                      Then by: NAME
                      Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L8
            NAME;L25
            COUNT(LAB WORK ELEMENT);L5;"# LWE"
```

SAMPLE OUTPUT: In the example shown below, Mono Test has been defined as TYPE=BOTH and RESULT OPTIONAL=YES. This is not recommended and should be corrected.

```
NUMBER    NAME                        # LWE
-------------------------------------------------------
            Work Element: MAIN LAB - SEROLOGY
642       MONO TEST                   1
```

__ **GS_LT_L_RSLT OPTIONAL (YES):** All tests defined as RESULT OPTIONAL = YES should be reviewed. This usually includes most components of the differential and urinalysis. User will be prompted for entry of the name of the Work Element as a range as shown below.

SORT TEMPLATE:

```
Sort by:     '@(TYPE'="NEITHER")&(TYPE'="")
               Then by: LAB WORK ELEMENT
               Sub-fld: '@RESULT OPTIONAL["Y"
                   Then by: |ACCESSION AREA
                   Sub-fld: .01:(#.16)_" - "_(#.01);S1;C15;L
      65;"Work Element"
                   Start with Work Element: MAIN LA
                   Go to Work Element: MAIN LA~
                     Then by: NAME
                     Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L8
            NAME;L25
            COUNT(LAB WORK ELEMENT);L5;"# LWE"
            TYPE;L1;"T Y P E"
            SINGLE/PANEL;L1;"S / P"
```

SAMPLE OUTPUT:

```
                                          T
                                          Y  S
                                          P  /
NUMBER   NAME                       # LWE  E  P
-------------------------------------------------------
             Work Element: Main Lab - HEMATOLOGY

1149    ACANTHOCYTES                  3      O  S
25      ANISOCYTOSIS                  3      O  S
12      BANDS                         3      O  S
16      BASOPHILS                     3      O  S
1400    BASOPHILLIC STIPPLING         2      O  S
```

__ **GS_LT_M_SECONDARY TEST:** If a test has a SECONDARY TEST assigned, it must have a BOOLEAN EXPRESSION. This list shows all tests that have secondary tests. Tests defined as RESULT TYPE = SET OF CODES will also show each code, expansion, and alert as defined. The Boolean Expression needs to address case-sensitive entries of the CODE, not expansion for these tests. Verify that the secondary test is 'orderable' (TYPE = INPUT or BOTH). Review data for accuracy.

Note that this ad hoc is based upon Lab Method(s) defined at the MTF Lab Method level.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: MTF LAB METHOD  (multiple)
              Sub-fld: MTF LAB METHOD:
              Fld: '@COUNT(SECONDARY TEST)>0
                  Then by:  NAME
```

PRINT TEMPLATE:

```
Flds:  NUMBER;C1;L6;S
        NAME;C9;L30
        RESULT TYPE;L12
        MTF LAB METHOD   (multiple)
            MTF LAB METHOD:
            SECONDARY TEST   (multiple)
              "2ndary Test: {"_SECONDARY  TEST_"}";C5;L45;S;""
              "2ndary Test TYPE: ["_(SECONDARY TEST:TYPE)_"]";C52;L28;X
              "Boolean Exp: ";C5;X
              BOOLEAN EXPRESSION;C18;W62;" "

            DUP(" ",IOM-2);C1;X
            RESULT CODES   (multiple)
              "CODE: "_CODE;C5;L13;""
              "Exp: "_EXPLANATION;C20;L45;""
              "Alert: "_ALERT;C67;L13;""
```

SAMPLE OUTPUT:

```
SECONDARY LAB TESTS                          01 Sep 1995@1029    PAGE 1
NUMBER  NAME                              RESULT TYPE
-------------------------------------------------------------------------
175     GLUCOSE                           NUMERIC

    2ndary Test: {ACETONE}                          2ndary Test TYPE: [BOTH]
    Boolean Exp: LRX>400

4       HCT                               NUMERIC

    2ndary Test: {zH&H ALERT Remark}                2ndary Test TYPE: [BOTH]
    Boolean Exp: (LRX-(3*LRRSLT(3))>4)!(3*(LRRSLT(3))-LRX>4)


197     URINE GLUCOSE                     SET OF CODES

    2ndary Test: {REDUCING SUBSTANCES}              2ndary Test TYPE: [BOTH]
    Boolean Exp: (".T.1.2.3.4."[("."_LRX_".")!(LRAGE'=+LRAGE))&('$D(LRTEST(1878
                    )))


    CODE: 1        Exp: 1+                                    Alert: H
    CODE: 2        Exp: 2+                                    Alert: H
    CODE: 3        Exp: 3+                                    Alert: H*
    CODE: 4        Exp: 4+                                    Alert: H*
    CODE: N        Exp: NEG                                   Alert:
    CODE: T        Exp: TRACE                                 Alert:
```

Notes: In the 2nd example, the 'remark' test is being ordered as a secondary test based upon the result comparison of two tests, HCT and HGB (IEN=3). If the mathematical difference between the HCT and 3 times the HGB is >4, this test is ordered.

In the 3rd example, the Reducing Substances test is ordered if the URINE GLUCOSE is ANY 'POSITIVE' result or if the age of the patient is less than 2 years. Due to the increased allowable length of 200 characters in the Boolean Expression field, all possible combinations of 'POSITIVE' can be handled. The 1st part of the expression literally is true if the string ".T.1.2.3.4." contains the value of LRX concatenated on both sides with ".". This is better than using the logic if LRX'="N" to imply a 'positive' result because Common Results {such as QNS} would make the expression true and subsequently trigger a prompt for the Secondary Test.

LRAGE is a variable used by the system, and if the patient is less than 2 years of age, the value of this variable is an expression containing a number and a letter to denote #days or #months of age. When the (+) symbol is applied to this variable, the mathematical outcome is just the numeric portion of the LRAGE variable. If LRAGE = 16m, +LRAGE = 16, and since these two are not equal, the condition set in the

formula (LRAGE'=+LRAGE) would then be true and result in the system placing an order for the secondary test.

__ **GS_LT_N_REF RANGE 132COL:** All numeric tests should have their reference ranges reviewed. Both a low and high value must be present for abnormal flagging to occur. Review the age group upper limit to verify that the limit is appropriate (e.g., '1' was selected when '999' was intended). User will be prompted to enter name of Lab Work Element as shown below.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
  Then: '@SUBSCRIPT;1  (Select: CLINICAL CHEMISTRY)
  Then: '@SINGLE/PANEL;1  (Select: SINGLE)
  Then: '@RESULT TYPE;1   (Select: NUMERIC)
  Then by: |ACCESSION AREA
  Sub-fld: .01:(#.16)_" - "_(#.01);C15;L65;S1;"Work Element"
                          (Start with: MAIN LA  & Go to: MAIN LA~)
  Then: NAME            (Start with: FIRST//)
```

PRINT TEMPLATE:

```
Flds: NUMBER;S;L6
            NAME;L15
            MTF LAB METHOD   (multiple)
            .01:            (<== filejump)
            LAB METHOD;L15
            SITE/SPECIMEN     (multiple)
              .11;L6;"ABS LO"
              .12;L6;"ABS HI"
              SITE/SPECIMEN;L7;"SITE/SP"
              REFERENCE VALUE  (multiple)
                  SEX;L1;"S E X"
                  AGE GROUP       (multiple)
                    AGE GROUP;L10
                    UPPER LIMIT;L5;"UPPER LIMIT YEARS"
                    REFERENCE LOW;L5;"REFER LOW"
                    REFERENCE HIGH;L5;"REFER HIGH"
                    PANIC LOW;L5
                    PANIC HIGH;L5
```

SAMPLE OUTPUT:

NUMBER	NAME	LAB METHOD	ABS LO	ABS HI	SITE/SP	SEX	AGE GROUP	UPPER LIMIT YEARS	REFER LOW	REFER HIGH	PANIC LOW	PANIC HIGH
	Work Element: MAIN LAB - CHEMISTRY											
176	SODIUM	SODIUM	1	999	URINE	M	ALL	999				
			1	999	SERUM	M	ALL	999				
			1	999	PERITON	M	ALL	999				
			1	999	24HR U	M	ALL	999	80	180		
			1	999	DIALYSA	M	ALL	999				
			1	999	BODY FL	M	ALL	999				
	Work Element: MAIN LAB - HEMATOLOGY											
3	HGB	HGB	0	999	BLOOD	M	ADULT	150	13.8	18	6.9	18.1
						F	ADULT	150	12	16	6.9	18.1

__ **GS_LT_O_DEFLT VALU & CODES:** If a DEFAULT VALUE is defined for a set of codes test, the value must match one of the RESULT CODES.

SORT TEMPLATE:

```
Sort by:     '@(TYPE'="NEITHER")&(TYPE'="")
             Then by: '@RESULT TYPE;1
             Select: SET OF CODES
               Then by: MTF LAB METHOD  (multiple)
               Sub-Fld: MTF LAB METHOD:
               Fld: SITE/SPECIMEN  (multiple)
               Sub-field: '@DEFAULT VALUE'=""
                   Then by: NAME
                   Start with: FIRST//
```

PRINT TEMPLATE:

```
Fld:  NUMBER;L6;S
      NAME;L15
      MTF LAB METHOD        (multiple)
      MTF LAB METHOD:
      1ST(SITE/SPECIMEN:DEFAULT VALUE);L7;"1ST S/S DEFAULT"
      SETPARAM(1ST(SITE/SPECIMEN:DEFAULT VALUE),"XX");X
      2ND(SITE/SPECIMEN:DEFAULT VALUE);L7;"2ND S/S DEFAULT"
      SETPARAM(2ND(SITE/SPECIMEN:DEFAULT VALUE),"YY");X
      3RD(SITE/SPECIMEN:DEFAULT VALUE);L7;"3RD S/S DEFAULT"
      SETPARAM(3RD(SITE/SPECIMEN:DEFAULT VALUE),"ZZ");X
      "("_COUNT(SITE/SPECIMEN)_")";L4;"# OF S/S"
      RESULT CODES          (multiple)
            CODE;C58;L4
           $S((CODE=PARAM("XX"))!(CODE=PARAM("YY"))!(CODE=P
ARAM("ZZ")):"+++[MATCH]+++",1:"<---NO MATCH--->");C64;X
```

SAMPLE OUTPUT: In the example shown below, the default value for the 2nd site/specimen does not match one of the result codes. The default value should be corrected to one of the result codes.

NUMBER	NAME	1ST S/S DEFAULT	2ND S/S DEFAULT	3RD S/S DEFAULT	# of S/S	CODE	
489	APPEARANCE	CR	CLEAR		(2)	1	<NO MATCH>
					(2)	2	<NO MATCH>
					(2)	3	<NO MATCH>
					(2)	4	<NO MATCH>
					(2)	5	<NO MATCH>
383	COLOR	Y			(1)	NO	<NO MATCH>
					(1)	Y	+MATCH+
					(1)	S	<NO MATCH>
					(1)	A	<NO MATCH>
					(1)	R	<NO MATCH>
					(1)	O	<NO MATCH>
					(1)	X	<NO MATCH>

__ **GS_LT_P_DELTA CHECK:** If a DELTA CHECK is defined for a numeric test, the test must have a DELTA VALUE.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: MTF LAB METHOD  (multiple)
              Sub-Fld: MTF LAB METHOD:
              Fld: SITE/SPECIMEN  (multiple)
              Sub-field: (DELTA CHECK'="")&(DELTA VALUE="")
                  Then by: NAME
                  Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L15
            MTF LAB METHOD   (multiple)
            LAB METHOD;L15
              MTF LAB METHOD:
              SITE/SPECIMEN  (multiple)
                  SITE/ SPECIMEN;L8
                  DELTA CHECK;L8
                  DELTA VALUE;L5
```

SAMPLE OUTPUT: In the example shown below, Acetone and Magnesium do not have delta values defined. The Delta Value should be completed or the Delta Check should be removed.

NUMBER	NAME	LAB METHOD	SITE/ SPECIMEN	DELTA CHECK	DELTA VALUE
193	ACETONE	ACETONE	SERUM	PERCENT	
1931	MAGNESIUM	MAGNESIUM	SERUM	ABS VALU	

__ **GS_LT_Q_DEFLT VALU & NUMERICS:** Numeric tests should not have a DEFAULT VALUE defined.

SORT TEMPLATE:

```
Sort by:     '@(TYPE'="NEITHER")&(TYPE'="")
               Then by: '@SUBSCRIPT;1
               Select: CLINICAL CHEMISTRY
                    Then by: '@RESULT TYPE;1
                    Select: NUMERIC
                       Then by: MTF LAB METHOD  (multiple)
                       Sub-fld: MTF LAB METHOD:
                       Fld: SITE/SPECIMEN  (multiple)
                       Sub-fld: '@DEFAULT VALUE'=""
                         Then by: NAME
                         Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L15
            MTF LAB METHOD  (multiple)
              MTF LAB METHOD:
              LAB METHOD;L15
              SITE/SPECIMEN  (multiple)
                  SITE/ SPECIMEN;L8
                  DEFAULT VALUE;L7
```

SAMPLE OUTPUT:

```
                                          SITE/     DEFAULT
NUMBER   NAME             LAB METHOD      SPECIMEN  VALUE
-------------------------------------------------------------------
177      POTASSIUM        POTASSIUM       SERUM     K
```

__ **GS_LT_R_LAB TEST IN PANEL:** The lab tests assigned to a panel must have a site/specimen that matches the default specimen of the collection sample of the panel test.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@SUBSCRIPT;1
              Select: CLINICAL CHEMISTRY
                  Then by: '@SINGLE/PANEL;1
                  Select: PANEL
                     Then by: NAME
                     Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;S
            NAME;L15
            COLLECTION SAMPLE      (multiple)
              COLLECTION SAMPLE;L10
              COLLECTION SAMPLE:        <=FileJump
              DEFAULT SPECIMEN;L10


            |LAB TEST IN PANEL   (multiple)
              LAB TEST IN PANEL;L15
              LAB TEST IN PANEL:       <=FileJump
              MTF LAB METHOD     (multiple)
              MTF LAB METHOD:          <=FileJump
              SITE/SPECIMEN      (multiple)
              SITE/SPECIMEN;L10
```

SAMPLE OUTPUT:

NUMBER	NAME	COLLECTION SAMPLE	DEFAULT SPECIMEN	LAB TEST IN PANEL	SITE/SPECI
1772	ALPHA-FETOPROTE	BLOOD	SERUM	ALPHA-FETOPROTE	SERUM
				MOM/AFP	SERUM
1122	BILIRUBIN, TOTA	BLOOD	SERUM		
		CAPILLARY	SERUM	TOTAL BILIRUBIN	URINE
					SERUM
					CSF
					AMNIOTIC F
				DIRECT BILIRUBI	SERUM
					AMNIOTIC F

__ **GS_LT_S_MICRO SCREEN:** Tests defined with microbiology-type subscripts must have a MICRO SCREEN. Refer to the table preceding the 1st INPUT Template Illustration for the appropriate codes for each subscript. The last column shows the Execute Code that is associated to the test. Verify there are NO Execute Code entries from this ad hoc which appear in the format: "[LR ...]".

SORT TEMPLATE:

```
Sort by:  '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@INTERNAL(SUBSCRIPT);2
              Select: BT
              Select: PA
              Select: TB
              Select: MY
              Select: VI
                  Then by: NAME
                  Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L18
            INTERNAL(SUBSCRIPT);L5;"SUB- SCRPT"
            MICRO SCREEN;L15
            MICRO SCREEN:          <=FileJump
            $E(#1,$F(#1,"="),$L(#1));L26;"EXECUTE CODE"
```

SAMPLE OUTPUT:

NUMBER	NAME	SUB-SCRPT	MICRO SCREEN	EXECUTE CODE
1816	ANAEROBIC CULTURE	BT	BACTERIOLOGY	"LR BACTERIOLOGY"
1142	BLOOD CULTURE	BT	BACTERIOLOGY	"LR BACTERIOLOGY"
550	O&P CONCENTRATE EX	OP	O&P	"LR OP"

__ **GS_LT_T_LAB COLLECT SAMPLE:** The LAB COLLECTION SAMPLE should be one of the entries under COLLECTION SAMPLE. Note the Lab Collection field should ONLY be defined for those tests which can be collected on a Collection List (Blood Run). User is prompted for the Lab Work Element name.

SORT TEMPLATE:

```
Sort by:  '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@LAB COLLECTION SAMPLE'=""
                  Then by: LAB WORK ELEMENT  (multiple)
                  '@LAB WORK ELEMENT;1   {user selects}
                     Then by: NAME
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L20
            LAB COLLECTION SAMPLE;L10;"LAB COLLECT SAMPLE"
            LAB COLLECTION SAMPLE:           <=FileJump
                  TUBE TOP COLOR;"TUBE COLOR"

            COLLECTION SAMPLE  (multiple)
              COLLECTION SAMPLE;L10;"COLLECT SAMPLE"
              CONTAINER;"TUBE COLOR";L10
```

SAMPLE OUTPUT:

NUMBER	NAME	LAB COLLECT SAMPLE	TUBE COLOR	COLLECT SAMPLE	TUBE COLOR
1770	2HR POSTPRANDIAL	BLOOD	GRAY	BLOOD	GRAY
1811	ABO/RH TYPING	BLOOD	MARB/RED	BLOOD	MARB/RED
206	AMMONIA	BLOOD	GREEN	BLOOD	GREEN
196	AMYLASE	BLOOD	MARB/RED	BLOOD	MARB/RED

__ **GS_LT_U_COLLECTION SAMPLE:** The default specimen of the COLLECTION SAMPLE must match one of the site/specimens defined for the test. If the test does not have a site/specimen that matches the default specimen of the collection sample, **results cannot be entered**.

SORT TEMPLATE:

```
Sort by:  '@SUBSCRIPT;1
            Select: CLINICAL CHEMISTRY
              Then by: '@SINGLE/PANEL;1
              Select: SINGLE
                  Then by: '@TYPE;1
                  Select: BOTH
                    Then by: NAME
                     Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
            NAME;L25
            COLLECTION SAMPLE  (multiple)
              COLLECTION SAMPLE;L10
              COLLECTION SAMPLE:      <=FileJump
                DEFAULT SPECIMEN;L10


            MTF LAB METHOD  (multiple)
              MTF LAB METHOD:         <=FileJump
              SITE/SPECIMEN  (multiple)
                  SITE/SPECIMEN;L10;"SITE/ SPECIMEN"
```

SAMPLE OUTPUT:

NUMBER	NAME	COLLECTION SAMPLE	DEFAULT SPECIMEN	SITE/ SPECIMEN
1770	2HR POSTPRANDIAL	BLOOD	PLASMA	PLASMA
1811	ABO/RH TYPING	BLOOD	SERUM	SERUM
193	ACETONE	BLOOD	SERUM	BLOOD
				SERUM
185	ALBUMIN	BLOOD	SERUM	SERUM
				CSF

__ **GS_LT_V_APPROVAL REQUIRED LIST:** This will provide a list of 'active' tests defined needing APPROVAL. These tests may be ordered, logged in, but NOT RESULTED until APPROVED through the 'OAP' menu option.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
              Then by: '@APPROVAL REQUIRED;1
              Select: YES
                  Then by: NAME
                  Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER;L6
           NAME;L25
```

SAMPLE OUTPUT:

```
NUMBER    NAME
-----------------------------------------------------------
1858      ADDITIONAL DRUGS/
1856      AMPHETAMINES/AML
1798      AUTOPSY
1894      TOXICOLOGY SCREEN
```

__ **GS_LT_W_ACCESSION AREA:** Each test, whether 'active' or considered as 'inactivated' must have at least one Accession Area defined.

SORT TEMPLATE:

```
Sort by: '@COUNT(ACCESSION AREA)<1
              Then by: NAME
              Start with: FIRST//
```

PRINT TEMPLATE:

```
Flds: NUMBER
            NAME
            SINGLE/PANEL
            TYPE
```

SAMPLE OUTPUT:

```
NUMBER  NAME                          SINGLE/PANEL  TYPE
-------------------------------------------------------------
1876    PMT TEST                      PANEL         INPUT
```

__ **GS_LT_X_CPT CODE_SINGLE**: Tests need to be assigned a CPT Code for workload capture effective 1 October 1995 for ALL CONUS sites, including Guam and Puerto Rico. This routine will provide an Alphabetical (within ACCN AREA) listing of All 'active' Single, Result Optional (NO) Tests. There are traps setup in the print template to assist in identifying errors that need correction. Review data for accuracy.

(A) If a CPT code has been inactivated in a future upgrade this ad hoc will display CPT CODE??? in the Modifiers column, showing that the existing entry in the lab test file needs to be updated.

(B) If the Path Consult Flag has been set to YES in the Lab Test file and there is no '26' modifier for the CPT Code defined for the procedure in the CPT/HCPCS file, <*> will appear in the final column.

(C) If any of the lab tests have been defined with a CPT Code which is between 80000 and 80020 (Codes ONLY for internal use by the system for AMTs), <ERR> will display in the CPT Code column.

Due to the complexity of Multiple fields, the user will be prompted twice for entry of the same Lab Work Element: first as a range, and secondly as a 'Select' as shown below.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
 then:   '@SINGLE/PANEL;1          (Select: SINGLE)
 then:   LAB WORK ELEMENT       (multiple)
            Sub-fld: '@RESULT OPTIONAL'["Y"
 then:   |ACCESSION AREA    (multiple)
            Sub-fld: .01:(#.16)_" - "_(#.01);C15;L65;S1;"Work Element"
            Start with: MAIN LA
            Go to: MAIN LA~
 then:   LAB WORK ELEMENT       (multiple)
            Sub-fld:  '@LAB WORK ELEMENT;1     (User input, eg: MAIN LAB)
 then:   @NAME            (Start with: FIRST//)
```

PRINT TEMPLATE:

```
Flds: NUMBER;L7
      PRINT NAME;L11
      RESULT TYPE;L1;"R T Y P"
      TYPE;L1;"T Y P E"
      LAB WORK ELEMENT       (multiple)
        RESULT OPTIONAL;L1;"O P T"
        CPT SENDOUT;L1;"S / O"
        TEST COST;L7;"Te$t Co$t"
        CPT CODE       (multiple)
            SETPARAM(CPT CODE,"CPT");X
            SETPARAM($S((PARAM("CPT")>"80000")&(PARAM("CPT")<
```

```
      "80020"):"<ERR>",1:PARAM("CPT")),"CPT");X
                  SETPARAM($E(PATHOLOGY CONSULT FLAG,1,1),"CON");X
                  PARAM("CON");L1;"P T H"
                  CPT CODE:                <=FileJump
                  PARAM("CPT");L5;"CPT CODE"
                  1ST(MODIFIER:PRINT NAME);L8;"CPT PRNT NAME"
                  SETPARAM(1ST(MODIFIER:MODIFIER),"M1");X
                  SETPARAM(2ND(MODIFIER:MODIFIER),"M2");X
                  SETPARAM(3RD(MODIFIER:MODIFIER),"M3");X
                  SETPARAM(4TH(MODIFIER:MODIFIER),"M4");X
                  SETPARAM(PARAM("M1")_" "_PARAM("M2")_" "_PARAM(
      "M3")_" "_PARAM("M4"),"MOD");X
                  $S(PARAM("CPT")'=""&($L(PARAM("MOD"))=3):"CPT C
      ODE???",1:PARAM("MOD"));L11;"Modifiers"
                  $S(PARAM("CON")="Y"&(PARAM("MOD")'["26"):" <*>"
      ,1:"");C76;X


      HEADING: GS_LT_X_CPT_SINGLE
```

SAMPLE OUTPUT

```
GS_LT_X_CPT_SINGLE                                  26 Jul 1996@1730    PAGE 1
                      R  T
                      T  Y  O  S           P         CPT
                      Y  P  P  /  Te$t     T  CPT    PRINT
NUMBER   PRINT NAME   P  E  T  O  Co$t     H  CODE   NAME       Modifiers
-------------------------------------------------------------------------------
                 Work Element: MAIN LAB - BLOOD BANK
1000123  ABO/RH       F  B  N                 86901  BLD TYPEI  00 32 90

                 Work Element: MAIN LAB - CHEMISTRY
1811     ALPHA-FETOP  S  B                    86244  CPT CODE???
100      GLUCOSE      N  B  N                 <ERR>  1-2 CHEM   00 32 90
2815     IGG, QUANT   N  B          90.00  Y  82644  ELEC,NOS   00 32 90     <*>
```

__ **GS_LT_Y_CPT CODE_PNL**: Tests need to be assigned a CPT Code for workload capture. This report will provide an Alphabetical (within ACCN AREA) listing of All 'active' Panel Tests. There are traps set up in the print template to assist in identifying errors that need correction. Review data for accuracy.

(A) If a CPT code has been inactivated in a future upgrade this ad hoc will display CPT CODE??? in the Modifiers column, showing that the existing entry in the lab test file needs to be updated.

(B) If the Path Consult Flag has been set to YES in the Lab Test file and there is no '26' modifier for the CPT Code defined for the procedure in the CPT/HCPCS, <*> will appear in the final column.

(C) If any of the lab tests have been defined with a CPT Code which is between 80000 and 80020 (Codes ONLY for internal use by the system for AMTs), <ERR> will display in the CPT Code column.

Due to the complexity of Multiple fields, the user will be prompted twice for entry of the same Lab Work Element: first as a range, and secondly as a 'Select' as shown below.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
 then:   '@SINGLE/PANEL;1          (Select: PANEL)
 then:   |ACCESSION AREA    (multiple)
            Sub-fld: .01:(#.16)_" - "_(#.01);C15;L65;S1;"Work Element"
            Start with: MAIN LA
            Go to: MAIN LA~
 then:   LAB WORK ELEMENT       (multiple)
            Sub-fld:  '@LAB WORK ELEMENT;1   (User input, eg:
                                                    MAIN LAB)
 then:   @NAME            (Start with: FIRST//)
```

PRINT TEMPLATE:

```
Flds:  NUMBER;L7
       PRINT NAME;L13
        TYPE;L1;"T Y P E"
        LAB WORK ELEMENT       (multiple)
            UNIQUE ACCESSION;L1;"U N I Q"
            CPT SENDOUT;L1;"S / O"
            TEST COST;L7;"Te$t Co$t"
            CPT CODE       (multiple)
              SETPARAM(CPT CODE,"CPT");X
              SETPARAM($S((PARAM("CPT")>"80000")&(PARAM("CPT")<"80
     020"):"<ERR>",1:PARAM("CPT")),"CPT");X
              SETPARAM($E(PATHOLOGY CONSULT FLAG,1,1),"CON");X
```

```
                PARAM("CON");L1;"P T H"
                CPT CODE:              <=FileJump
                PARAM("CPT");L5;"CPT CODE"
                1ST(MODIFIER:PRINT NAME);L8;"CPT PRNT NAME"
                SETPARAM(1ST(MODIFIER:MODIFIER),"M1");X
                SETPARAM(2ND(MODIFIER:MODIFIER),"M2");X
                SETPARAM(3RD(MODIFIER:MODIFIER),"M3");X
                SETPARAM(4TH(MODIFIER:MODIFIER),"M4");X
                SETPARAM(PARAM("M1")_" "_PARAM("M2")_" "_PARAM("M3")
        _" "_PARAM("M4"),"MOD");X
                $S(PARAM("CPT")'=""&($L(PARAM("MOD"))=3):"CPT CODE?
        ??",1:PARAM("MOD"));L11;"Modifiers"
                $S(PARAM("CON")="Y"&(PARAM("MOD")'["26"):" <*>",1:"
        ");C76;X


        HEADING: LT_Y_CPT_PNL
```

SAMPLE OUTPUT

```
GS_LT_Y_CPT_PANEL                                  26 Jul 1996@1730    PAGE 1
                        T  U
                        Y  N  S           P         CPT
                        P  I  /  Te$t     T  CPT    PRINT
NUMBER   PRINT NAME     E  Q  O  Co$t     H  CODE   NAME       Modifiers
-------------------------------------------------------------------------------
                Work Element: MAIN LAB - BLOOD BANK
1000332  ANTIBODY PANE  I                    86850  ABS,EA     00 32 90
                                              86870  AB ID,PN   00 32 90
                                              86886  AHG,TIT    00 32 90

                Work Element: MAIN LAB - CHEMISTRY
1294     CHEM 7         I                    <ERR>  7 CHEM     00 32 90

                Work Element: MAIN LAB - HEMATOLOGY
1294     CBC PANEL      I        1.98        85031  HEMO VII   00 32 90
```

__ **GS_LT_Z_NO_LAB METHOD**: This ad hoc will provide an Alphabetical (within ACCN AREA) listing of All 'active' Single CH Subscript Tests with NO Lab Method defined either at the MTF or Lab Work Element level. Review data for accuracy.

Due to the complexity of Multiple fields, the user will be prompted twice for entry of the same Lab Work Element: first as a range, and secondly as a 'Select' as shown below.

SORT TEMPLATE:

```
Sort by: '@(TYPE'="NEITHER")&(TYPE'="")
 Then: '@SINGLE/PANEL;1              (Select: Single)
 Then: '@SUBSCRIPT;1            (Select: CH)
 Then: |ACCESSION AREA    (multiple)
            Sub-fld: .01:(#.16)_" - "_(#.01);C15;L65;S1;"Work Element"
            Start with: MAIN LA
            Go to: MAIN LA~
 Then: LAB WORK ELEMENT       (multiple)
            Sub-fld:  '@LAB WORK ELEMENT;1     (User input, eg:
                                                MAIN LAB)
 Then: @NAME            (Start with: FIRST//)
```

PRINT TEMPLATE:

```
flds:  SETPARAM(NUMBER,"NBR");X
             SETPARAM(NAME,"TEST");X
             SETPARAM(COUNT(#1.1),"MTF#");X
             LAB WORK ELEMENT     (multiple)
               SETPARAM(COUNT(#2.1),"LWE#");X
               $S(PARAM("MTF#")="0"&(PARAM("LWE#")="0"):"No Method
       : "_PARAM("NBR")_"  "_PARAM("TEST"),1:"");L80;" "
```

SAMPLE OUTPUT:

```
                Work Element: MAIN LAB - CHEMISTRY
No Method:  1234  5HR,GLUCOSE

                Work Element: MAIN LAB - SHIPPING
No Method:  2109  PLUMBOUS CONTENT
```

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